

KIM GEBRUIKERS CLUB
NEDERLAND
2DE JAARGANG NR. 8
20 AUGUSTUS 1979

DE

KIM

KENNER

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C1

U34
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U4
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U5
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U8
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U9
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U10
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U11
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U23
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C18

U18
U11

U10
U9

U8
U7

U6
U5

U4
U3

U2
U1

U14
C18

U15
C18

U17

U16
C18

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U20
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U24

U25

U26

U27

U28

U29

GO
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KIM

GEBRUIKERS CLUB NEDERLAND

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TARGET (1-column)		<u>Nummer:</u>
		<u>Blad:</u> 1 van 5

Auteur:
 Fer Weber
 Gebr.Wienerstr. 139
 5913 XS Venlo
 Holland

Bij dit spelletje worden de horizontale streepjes van het KIM-display gebruikt als bewegend doel. Na starten gaat op de bovenste lijn een streepje lopen van links naar rechts. Toets 3 wordt gebruikt als schietknop. Geschoten wordt op digit 4 van het display.

Bij raak verdwijnt het streepje. Bij mis komt er een streepje bij. Maximaal dus drie streepjes onder elkaar.

.....

z-page use	0000	SEG PTR	=segmentpointer
	0001	DIG PTR	=digitpointer
	0002	SPEED	
	0003	SEG1	=segmentcode 1
	0004	SEGOF1	=segment off
	0005	SEG2	
	0006	SEGOF2	
	0007	SEG3	
	0008	SEGOF3	
	0009	MESPT1	=messagepointer 1
	000A	MESPT2	
	000B	MESPT3	
	000C	MESPT4	
	000D	MESPT5	
	000E	CODE ST	=segmentcode store
	000F	REPEAT	=repeats message
	0010	TEMPX	=(not used)
	0011	LOOP CO	=loopcounter
0200 D8	START	CLD	binary mode
0201 A9 00		LDA imm	initialization
0203 85 04		STA SEGOF1	
0205 85 06		STA SEGOF2	
0207 85 08		STA SEGOF3	
0209 A9 03		LDA imm	
020B 85 00		STA SEG PTR	
020D A9 03		LDA imm	
020F 85 0F		STA REPEAT	
0211 A9 80		LDA imm	
0213 85 02		STA SPEED	
0215 A9 81		LDA imm	
0217 85 03		STA SEG1	
0219 A9 C1		LDA imm	
021B 85 05		STA SEG2	
021D A9 C9		LDA imm	

<u>Datum ingang:</u> 18 juni 1979	<u>Vervangt:</u> -	<u>d.d.:</u> -	<u>Ref.:</u> Fer Weber
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TARGET (1-column)		Nummer:
		Blad: 2 van 5
021F 85 07	STA SEG3	
0221 A9 3B	LDA imm	
0223 85 09	STA MESPT1	
0225 A9 41	LDA imm	
0227 85 0A	STA MESPT2	
0229 A9 47	LDA imm	
022B 85 0B	STA MESPT3	
022D A9 4D	LDA imm	
022F 85 0C	STA MESPT4	
0231 A9 53	LDA imm	
0233 85 0D	STA MESPT5	
0235 A9 07	STARTC LDA imm	initialize digitpointer
0237 85 01	STA DIGPTR	
0239 E6 01	CONTIN INC DIGPTR	next digit
023B E6 01	INC DIGPTR	
023D A5 01	LDA DIGPTR	
023F C9 15	CMP imm	digit "7"?
0241 F0 F2	BEQ STARTC	
0243 A6 00	TOSHOW LDX SEGPTR	
0245 B5 00	LDA z-p,X	get segmentcode
0247 85 0E	STA CODEST	and store
0249 20 54 02	LITEUP JSR SHOW	
024C A9 00	LDA imm	
024E 8D 42 17	STA abs	digit off
0251 4C 74 02	JMP ANYKEY	
0254 A9 7F	SHOW LDA imm	
0256 8D 41 17	STA abs	padd = 1
0259 A5 01	LDA DIGPTR	
025B 8D 42 17	STA abs	digit on
025E A5 0E	LDA CODEST	
0260 8D 40 17	STA abs	segments on
0263 A0 20	LDY imm	and wait
0265 88	LOOP DEY	
0266 D0 FD	BNE LOOP	
0268 60	RTS	
0269 A2 80	PAUSE LDX imm	
026B A0 FF	LOOP1 LDY imm	
026D 88	LOOP2 DEY	
026E D0 FD	BNE LOOP2	
0270 CA	DEX	
0271 D0 F8	BNE LOOP1	
0273 60	RTS	
0274 20 40 1F	ANYKEY JSR KEYIN	
0277 20 6A 1F	JSR GETKEY	
027A C9 15	CMP imm	no key?
027C D0 17	BNE GOKEY	
027E C6 02	NOKEY DEC SPEED	
Datum ingang:	Vervangt:	d.d.:
18 juni 1979	-	-
		Ref.:
		Fer Weber

TARGET (1-column)		Nummer:
		Blede: 3 van 5
0280 D0 C7	BNE LITEUP	
0282 A9 80	LDA imm	restore <u>speed</u>
0284 85 02	STA SPEED	
0286 A5 00	LDA SEG PTR	
0288 4A	LSR acc	segx or segofx?
0289 90 05	BCC NEXDIG	
028B E6 00	INC SEG PTR	
028D 4C 43 02	JMP TOSHOW	
0290 C6 00	NEXDIG DEC SEG PTR	
0292 4C 39 02	JMP CONTIN	
0295 C9 13	GOKEY CMP imm	key "GO"?
0297 D0 06	BNE KEY3	
0299 20 69 02	JSR PAUSE	
029C 4C 00 02	JMP START	
029F C9 03	KEY3 CMP imm	key "3"?
02A1 D0 42	BNE ILLKEY	no, then illegal key
02A3 20 69 02	JSR PAUSE	
02A6 A5 01	LDA DIG PTR	
02A8 C9 0F	CMP imm	also digit "4"?
02AA D0 0E	BNE MISS	
02AC A5 00	LDA SEG PTR	
02AE C9 03	CMP imm	seg1?
02B0 F0 54	BEQ WIN	
02B2 C9 05	CMP imm	seg2?
02B4 F0 3D	BEQ HIT	
02B6 C9 07	CMP imm	seg3?
02B8 F0 39	BEQ HIT	
02BA A5 00	MISS LDA SEG PTR	
02BC 48	PHA	save segmentpointer on stack
02BD A6 09	LDX MESPT1	
02BF 20 12 03	JSR MESSHO	
02C2 68	MISSCO PLA	return segmentpointer
02C3 85 00	STA SEG PTR	
02C5 E6 00	INC SEG PTR	
02C7 E6 00	INC SEG PTR	
02C9 A5 00	LDA SEG PTR	
02CB C9 09	CMP imm	lose?
02CD F0 07	BEQ LOSE	
02CF C9 0A	CMP imm	lose?
02D1 F0 03	BEQ LOSE	
02D3 4C 35 02	JMP STARTC	
02D6 A6 0D	LOSE LDX MESPT5	
02D8 20 12 03	JSR MESSHO	
02DB C6 0F	DEC REPEAT	
02DD D0 F7	BNE LOSE	
02DF 20 69 02	JSR PAUSE	
02E2 4C 00 02	JMP START	

Datum ingang:	Vervangt:	d.d.:	Ref.:
18 juni 1979	-	-	Fer Weber

TARGET (1-column)		<u>Nummer:</u>
		<u>Blaad:</u> 4 van 5

02E5 A5 00	ILLKEY	LDA SEGPTR	
02E7 48		PHA	save segmentpointer on stack
02E8 A6 0B		LDX MESPT3	
02EA 20 12 03		JSR MESSHO	
02ED 20 69 02		JSR PAUSE	
02F0 4C C2 02		JMP MISSCO	
02F3 A5 00	HIT	LDA SEGPTR	
02F5 48		PHA	save segmentpointer on stack
02F6 A6 0A		LDX MESPT2	
02F8 20 12 03		JSR MESSHO	
02FB 68	HITCON	PLA	return segmentpointer
02FC 85 00		STA SEGPTR	
02FE C6 00		DEC SEGPTR	
0300 20 69 02		JSR PAUSE	
0303 4C 35 02		JMP STARTC	
0306 A6 0C	WIN	LDX MESPT4	
0308 20 12 03		JSR MESSHO	
030B C6 0F		DEC REPEAT	
030D D0 F7		BNE WIN	
030F 4C 00 02		JMP START	
0312 A9 80	MESSHO	LDA imm	initialize loopcounter
0314 85 11		STA LOOPCO	
0316 A9 07	DIGSTA	LDA imm	initialize digitpointer
0318 85 01		STA DIGPTR	
031A BD 0B 03	SEGSTA	LDA abs,X	get segmentcode
031D 85 0E		STA CODEST	
031F E6 01		INC DIGPTR	next digit
0321 E6 01		INC DIGPTR	
0323 A5 01		LDA DIGPTR	
0325 C9 15		CMP imm	digit "7"?
0327 F0 0C		BEQ MESSCO	
0329 20 54 02	SRSHOW	JSR SHOW	
032C A9 00		LDA imm	segments off
032E 8D 40 17		STA abs	
0331 E8		INX	
0332 4C 1A 03		JMP SEGSTA	
0335 CA CA CA		DEX DEX DEX	return Xregister to initial
0338 CA CA CA		DEX DEX DEX	state
033B C6 11		DEC LOOPCO	
033D D0 04		BNE AGAIN	
033F 20 69 02		JSR PAUSE	
0342 60		RTS	
0343 4C 16 03	AGAIN	JMP DIGSTA	

messages in Dutch:

0346 80 F1 BF BE F8 80
034C 80 9E BE 86 ED F8

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TARGET (1-column)		<u>Nummer:</u>
		<u>Blad:</u> 5 van 5

0352 80 F1 BF F9 86 80
0358 80 F6 BF F9 D0 F7
035E ED BE F1 F1 86 F9

-----e-----

alternative messages in English:

0346 B7 BF 80 F4 86 F8
034C 80 F4 86 F8 80 80
0352 F1 BF BE B8 80 80
0358 F6 9C D0 D0 F7 EE
035E ED F8 9C F3 84 DE

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<u>Datum ingang:</u> 18 juni 1979	<u>Vervangt:</u> -	<u>d.d.:</u> -	<u>Ref.:</u> Fer Weber
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TARGET (6-column)		<u>Nummer:</u>
		<u>Blad:</u> 1 van 8

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Fer Weber
Gebr.Wienerstr. 139
5913 XS Venlo
Holland

Nadat TARGET 1-column draaiend was gekregen, dacht ik het even uit te breiden tot alle kolommen van het KIM-display.... Nou, mooi mis! Het werd een heel nieuw opgezet programma. Nu moest alles dat op het display komt gemultiplexed worden. Verder moest in het geheugen een "speelveld" (STATE) gemaakt worden waarin alle veranderingen gepleegd worden en waaruit de gegevens voor het display gehaald worden (SEGST). Nu ik toch bezig was werden er maar meteen twee spelletjes in een gedraaid: zowel een "uit"schielt- als een "aan"schietspelletje. Verder werd er nu voor gezorgd dat pas na het loslaten van een toets het programma wordt vervolgd.

Na het starten van het programma komt nu de vraag "a of b" op het display. Men kan nu met toets "A" kiezen voor het spelletje "uit"schielen, of met toets "B" voor het spelletje "aan"schielen. Schietknop is weer toets "3" en schietdoel is ook weer digit 4. Spel A: winst als alle streepjes uit, dus uitschieten van aan-streepjes op digit 4.

Spel B: winst als alle streepjes aan, dus aanschieten van uit-streepjes op digit 4. Bv raak schieten op een kolom met al drie streepjes aan levert verlies op.

.....

z-page use	0000 DIGIPT =digitpointer
	0001 SEGMPT =segmentpointer
	0002 STATPT =statepointer
	0003 STATST =state store
	0004 LOOPCO =loopcounter
	0005 REPEST =repeat store
	0006 ONOFST =on/off store
	0007 OFFPTR =offpointer
	0008 MESPT1 =messagepointer 1
	0009 MESPT2
	000A MESPT3
	000B MESPT4
	000E PLAYST =play a or b store
	000F TEMPPL =temporary store play a or b
	0010 SEGST1 =segmentcode store, digit 1
	0011 SEGST2
	0012 SEGST3
	0013 SEGST4
	0014 SEGST5
	0015 SEGST6

<u>Datum ingang:</u> 18 juni 1979	<u>Vervangt:</u> -	<u>d.d.:</u> -	<u>Ref.:</u> Fer Weber
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TARGET (6-column)		<u>Nummer:</u>
		<u>Blad:</u> 2 van 8

0016 STATE1 =state of playing field
 0017 STATE2
 0018 STATE3
 0019 STATE4
 001A STATE5
 001B STATE6
 001C STATE7
 001D STATE8
 001E STATE9
 001F STATEA
 0020 STATEB
 0021 KEYSTO =temporary key store

0030 20 40 1F	INKEY	JSR KEYIN	this is subroutine that waits
0033 20 6A 1F		JSR GETKEY	till key is released
0036 85 21		STA KEYSTO	
0038 C9 15		CMP imm	no key?
003A F0 09		BEQ TORTS	
003C 20 6A 1F	INKEYC	JSR GETKEY	
003F C5 21		CMP KEYSTO	
0041 F0 F9		BEQ INKEYC	
0043 A5 21		LDA KEYSTO	
0045 60	TORTS	RTS	
0046 A2 0B	ISTATE	LDX imm	this is subroutine that fills
0048 95 15	FSTATE	STA z-p,X	STATE1 to STATEB in page 0
004A CA		DEX	with value in accumulator
004B D0 FB		BNE FSTATE	
004D 60		RTS	
004E 20 65 00	MESCON	JSR PAUSE	
0051 20 A0 03		JSR MESSHO	
0054 A5 04	LOOPC	LDA LOOPCO	get loopcounter
0056 F0 08		BEQ REPEAT	
0058 A6 01		LDX SEGMP	get segmentpointer
005A 20 6D 03		JSR DIGSTA	
005D 4C 54 00		JMP LOOPC	
0060 C6 05	REPEAT	DEC REPEST	
0062 D0 EA		BNE MESCON	
0064 60		RTS	
0065 A2 80	PAUSE	LDX imm	
0067 A0 FF	AA	LDY imm	
0069 88	A	DEY	
006A D0 FD		BNE A	
006C CA		DEX	
006D D0 F8		BNE AA	
006F 60		RTS	
0070 A4 02	TOSHOW	LDY STATPT	get statepointer
0072 A6 01		LDX SEGMP	get segmentpointer

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KIM

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TARGET (6-column)		<u>Nummer:</u>
		<u>Blad:</u> 3 van 8

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0074 20 57 03      JSR FILL
0077 A6 01          SEGSTA LDX SEGMPTR get segmentpointer
0079 20 63 03      JSR SHOW
007C 60            RTS

0080 A9 0F          RSTART LDA imm      initialize variables z-p
0082 85 01          STA SEGMPTR
0084 A9 1A          LDA imm
0086 85 03          STA STATST
0088 A9 F9          LDA imm
008A 85 07          STA OFFPTR
008C A9 E1          LDA imm
008E 85 08          STA MESPT1
0090 A9 E7          LDA imm
0092 85 09          STA MESPT2
0094 A9 ED          LDA imm
0096 85 0A          STA MESPT3
0098 A9 F3          LDA imm
009A 85 0B          STA MESPT4
009C A9 80          LDA imm
009E 20 46 00      JSR ISTATE
00A1 A9 81          LDA imm
00A3 85 1B          STA STATE6
00A5 A9 0A          LDA imm
00A7 85 05          STA REPEST
00A9 60            RTS

0200 20 80 00      START JSR RSTART start and initialize
0203 EA EA EA      NOP NOP NOP
0206 A5 08          PLAYAB LDA MESPT1 get messagepointer 1
0208 85 02          STA STATPT to statepointer
020A 20 A4 03      JSR MESHOC
020D 20 30 00      ANYKEY JSR INKEY
0210 C9 15          CMP imm   no key?
0212 D0 12          BNE KEYA
0214 A5 04          CONTIN LDA LOOPCO get loopcounter
0216 F0 08          BEQ BACK
0218 A6 01          LDX SEGMPTR get segmentpointer
021A 20 6D 03      JSR DIGSTA
021D 4C 0D 02      JMP ANYKEY
0220 20 77 00      BACK  JSR SEGSTA
0223 4C 0D 02      JMP ANYKEY

0226 C9 0A          KEYA  CMP imm   key A?
0228 D0 05          BNE KEYB
022A 85 0E          STA PLAYST store play a
022C 4C 35 02      JMP ONCONT
022F C9 0B          KEYB  CMP imm   key B?
0231 D0 E1          BNE CONTIN
0233 85 0E          STA PLAYST store play b

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TARGET (6-column)				<u>Nummer:</u>
				<u>Blad:</u> 4 van 8
0235 A5 03	ONCONT	LDA STATST	get state store	
0237 C9 14		CMP imm	done?	
0239 D0 02		BNE DONE		
023B A9 1A		LDA imm	statepointer to start	
023D 85 03	DONE	STA STATST	to state store	
023F 85 02		STA STATPT	and to statepointer	
0241 A9 01		LDA imm	initialize on	
0243 85 06		STA ONOFST	to on/off store	
0245 20 70 00		JSR TOSHOW		
0248 20 30 00	KEY	JSR INKEY		
024B C9 15		CMP imm	no key?	
024D D0 24		BNE GOKEY		
024F A5 04		LDA LOOPCO	get loopcounter	
0251 F0 08		BEQ ONOFF		
0253 A6 01		LDX SEGMP	get segmentpointer	
0255 20 6D 03		JSR DIGSTA		
0258 4C 48 02		JMP KEY		
025B A5 06	ONOFF	LDA ONOFST	get on/off	
025D F0 D6		BEQ ONCONT		
025F A5 02		LDA STATPT	get statepointer	
0261 85 03		STA STATST	to state store	
0263 C6 03		DEC STATST	- 1	
0265 A5 07		LDA OFFPTR	get offpointer	
0267 85 02		STA STATPT	to statepointer	
0269 A9 00		LDA imm	initialize off	
026B 85 06		STA ONOFST	to on/off store	
026D 20 A4 03		JSR MESHOC		
0270 4C 48 02		JMP KEY		
0273 C9 13	GOKEY	CMP imm	key GO?	
0275 D0 03		BNE KEY3		
0277 4C 00 02		JMP START		
027A C9 03	KEY3	CMP imm	key 3?	
027C D0 1A		BNE ILLKEY	no, therefore illegal key	
027E A5 13		LDA SEGST4	digit 4 lit?	
0280 D0 43		BNE HIT		
0282 A5 0E	MISS	LDA PLAYST	no, get play	
0284 85 0F		STA TEMPPL	store temporarily	
0286 C9 0A		CMP imm	play A?	
0288 D0 04		BNE MISSC		
028A A9 0B		LDA imm	yes, change to play B	
028C 85 0F		STA TEMPPL	and store temporarily	
028E A4 03	MISSC	LDY STATST	get state store	
0290 A6 01		LDX SEGMP	get segmentpointer	
0292 20 57 03		JSR FILL		
0295 4C C9 02		JMP HITCON		
0298 A5 09	ILLKEY	LDA MESPT2	get messagepointer 2	
029A 85 02		STA STATPT	to statepointer	

<u>Datum ingang:</u>	<u>Vervangt:</u>	<u>d.d.:</u>	<u>Ref.:</u>
18 juni 1979	-	-	Fer Weber

TARGET (6-column)		<u>Nummer:</u>
		<u>Blad:</u> 5 van 8

029C 20 4E 00		JSR MESCON	
029F A9 0A		LDA imm	restore repeat
02A1 85 05		STA REPEST	
02A3 A5 0E		LDA PLAYST	get playstore
02A5 C9 0A		CMP imm	play A?
02A7 D0 08		BNE ILCONT	
02A9 A9 C9		LDA imm	initialize 3segs
02AB 20 46 00		JSR ISTATE	
02AE 4C 35 02		JMP ONCONT	
02B1 A9 81	ILCONT	LDA imm	initialize 1segs
02B3 20 46 00		JSR ISTATE	
02B6 A9 80		LDA imm	initialize 0segs (blank)
02B8 85 17		STA STATE2	fill even states
02BA 85 19		STA STATE4	
02BC 85 1B		STA STATE6	
02BE 85 1D		STA STATE8	
02C0 85 1F		STA STATEA	
02C2 4C 35 02		JMP ONCONT	
02C5 A5 0E	HIT	LDA PLAYST	get play
02C7 85 0F		STA TEMPPL	store temporarily
02C9 A5 0F	HITCON	LDA TEMPPL	
02CB C9 0A		CMP imm	play A?
02CD D0 36		BNE B3SEGS	
02CF A5 13		LDA SEGST4	yes, what's in digit 4?
02D1 C9 80		CMP imm	0segs (blank)?
02D3 F0 10		BEQ MAKE1S	
02D5 C9 81		CMP imm	1segs?
02D7 D0 08		BNE A2SEGS	
02D9 A0 80		LDY imm	yes, load 0segs (blank)
02DB 20 B7 03		JSR STATCH	and change playing field
02DE 4C F5 02		JMP ALLBLA	check if all blanks
02E1 C9 C1	A2SEGS	CMP imm	2segs?
02E3 D0 08		BNE A3SEGS	
02E5 A0 81	MAKE1S	LDY imm	yes, load 1segs
02E7 20 B7 03		JSR STATCH	and change playing field
02EA 4C 35 02		JMP ONCONT	
02ED A0 C1	A3SEGS	LDY imm	load 3segs
02EF 20 B7 03		JSR STATCH	and change playing field
02F2 4C 35 02		JMP ONCONT	
02F5 A2 15	ALLBLA	LDX imm	load state 1 -1
02F7 E8	LOOPA	INX	
02F8 E0 21		CPX imm	all states done?
02FA F0 45		BEQ WIN	
02FC B5 00		LDA z-p,X	no, get state
02FE C9 80		CMP imm	0segs (blank)?
0300 F0 F5		BEQ LOOPA	
0302 4C 35 02		JMP ONCONT	

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TARGET (6-column)		Nummer:
		Blad:
		6 van 8

0305 A5 13	B3SEGS	LDA SEGST4	what's in digit 4?
0307 C9 C9		CMP imm	3segs?
0309 F0 40		BEQ LOSE	
030B C9 C1		CMP imm	2segs?
030D D0 0E		BNE B1SEGS	
030F A0 C9		LDY imm	load 3segs
0311 20 B7 03		JSR STATCH	and change playing field
0314 A5 0E		LDA PLAYST	get play
0316 C9 0A		CMP imm	play A?
0318 D0 17		BNE ALL3S	check if all segments lit
031A 4C 35 02		JMP ONCONT	
031D C9 81	B1SEGS	CMP imm	1segs?
031F D0 08		BNE B0SEGS	
0321 A0 C1		LDY imm	load 2segs
0323 20 B7 03		JSR STATCH	and change playing field
0326 4C 35 02		JMP ONCONT	
0329 A0 81	B0SEGS	LDY imm	load 1segs
032B 20 B7 03		JSR STATCH	and change playing field
032E 4C 35 02		JMP ONCONT	
0331 A2 15	ALL3S	LDX imm	load state 1 -1
0333 E8	LOOPB	INX	
0334 E0 21		CPX imm	all states done?
0336 F0 09		BEQ WIN	
0338 B5 00		LDA z-p,X	no, get next state
033A C9 C9		CMP imm	3segs?
033C F0 F5		BEQ LOOPB	
033E 4C 35 02		JMP ONCONT	
0341 A5 0A	WIN	LDA MESPT3	get messagepointer 3
0343 85 02		STA STATPT	to statepointer
0345 20 4E 00		JSR MESCON	
0348 4C 00 02		JMP START	
034B A5 0B	LOSE	LDA MESPT4	get messagepointer 4
034D 85 02		STA STATPT	to statepointer
034F 20 4E 00		JSR MESCON	
0352 4C 00 02		JMP START	
0357 C8	FILL	INY	statepointer +1
0358 B9 00 00		LDA abs,Y	get segmentcode
035B E8		INX	segmentpointer +1
035C 95 00		STA z-p,X	store segmentcode
035E E0 15		CPX imm	done?
0360 D0 F5		BNE FILL	
0362 60		RTS	
0363 A9 30	SHOW	LDA imm	initialize loopcounter
0365 85 04		STA LOOPCO	sets <u>speed</u>
0367 A5 06		LDA ONOFST	get on/off
0369 D0 02		BNE DIGSTA	

Datum ingang:	Vervangt:	d.d.:	Ref.:
18 juni 1979	-	-	Fer Weber

TARGET (6-column)		Nummer:
		Blad: 7 van 8

036B 46 04	LSR	LOOPCO	make offperiod half onperiod
036D A9 07	DIGSTA	LDA imm	initialize digitpointer
036F 85 00		STA DIGIPT	
0371 E6 00	DIGCON	INC DIGIPT	digitpointer +2
0373 E6 00		INC DIGIPT	
0375 A5 00		LDA DIGIPT	get digitpointer
0377 C9 15		CMP imm	digit "7"?
0379 F0 1D		BEQ LOOPCN	
037B A9 7F	LITEUP	LDA imm	
037D 8D 41 17		STA abs	padd =1
0380 A5 00		LDA DIGIPT	get digitpointer
0382 8D 42 17		STA abs	digit on
0385 E8		INX	segmentpointer +1
0386 B5 00		LDA z-p,X	get segmentcode
0388 8D 40 17		STA abs	segments on
038B A0 30		LDY imm	and wait
038D 88	WAIT	DEY	
038E D0 FD		BNE WAIT	
0390 A9 00		LDA imm	segments off
0392 8D 40 17		STA abs	
0395 4C 71 03		JMP DIGCON	
0398 A9 00	LOOPCN	LDA imm	digits off
039A 8D 42 17		STA abs	
039D C6 04		DEC LOOPCO	loopcounter -1
039F 60		RTS	
03A0 A9 01	MESSHO	LDA imm	initialize on
03A2 85 06		STA ONOFST	to on/off store
03A4 A4 02	MESHOC	LDY STATPT	get statepointer
03A6 A6 01		LDX SEGMPT	get segmentpointer
03A8 C8	MESFIL	INY	statepointer +1
03A9 B9 00 03		LDA abs,Y	get segmentcode
03AC E8		INX	segmentpointer +1
03AD 95 00		STA z-p,X	store segmentcode
03AF E0 15		CPX imm	done?
03B1 D0 F5		BNE MESFIL	
03B3 20 77 00		JSR SEGSTA	
03B6 60		RTS	
03B7 A6 03	STATCH	LDX STATST	get state
03B9 E8 E8		INX INX	statepointer +4
03BB E8 E8		INX INX	
03BD EA		NOP	
03BE 94 00		STY z-p,X	load xsegs in state
03C0 E0 1E		CPX imm	
03C2 F0 15		BEQ TODEC	
03C4 E0 1D		CPX imm	
03C6 F0 11		BEQ TODEC	
03C8 E0 1C		CPX imm	
03CA F0 0D		BEQ TODEC	

Datum ingang:	Vervangt:	d.d.s.:	Ref.:
18 juni 1979	-	-	Fer Weber

TARGET (6-column)		Nummer:
		Blad: 8 van 8

03CC E0 1B	CPX imm	
03CE F0 11	BEQ RETURN	
03D0 E8 E8	INX INX	statepointer +6
03D2 E8 E8	INX INX	
03D4 E8 E8	INX INX	
03D6 94 00	STY z-p,X	load xsegs in state
03D8 60	RETURN RTS	
03D9 CA CA	TODEC DEX DEX	statepointer -6
03DB CA CA	DEX DEX	
03DD CA CA	DEX DEX	
03DF 94 00	STY z-p,X	load xsegs in state
03E1 60	RTS	

messages in Dutch:

03E2 F7 80 BF F1 80 FC	message 1
03E8 F1 BF F9 86 80 80	message 2
03EE 80 F6 BF F9 D0 F7	message 3
03F4 ED BE F1 F1 86 F9	message 4
03FA 00 00 00 00 00 00	off

alternative messages in English:

03E2 F7 80 BF D0 80 FC	message 1
03E8 F1 BF BE B8 80 80	message 2
03EE F6 BE D0 D0 F7 EE	message 3
03F4 FC BE ED F8 F9 DE	message 4
03FA 00 00 00 00 00 00	off

Datum ingang:	Vervangt:	d.d.:	Ref.:
18 juni 1979	-	-	Fer Weber

AANVULLINGEN OP MICROCHESS 1.0	<u>Nummer:</u>
	<u>Blad:</u> 1 van 6

Fer Weber, Gebr.Wienerstr. 139, 5913 XS Venlo, Holland.

Uitgekeken op de vijf gegeven openingen bij Microchess 1.0 voor de KIM-1? Ik heb er eens een aantal bijeengesprokkeld en gecodeerd. Val niet direct over me heen als het bij tijd en wijle niet de meest ultramoderne versie is... ik ken ook alleen maar de spelregels. In ieder geval goed voor variaties.

Caro-Kann doorschuit		Frans doorschuit		Nimzo-Indisch	
Caro-Kann doorschuit	Frans doorschuit	Caro-Kann doorschuit	Frans doorschuit	Caro-Kann doorschuit	Frans doorschuit
44	44	44	44	44	44
00	00	00	00	00	00
DB	DB	DB	DB	DB	DB
CC	CC	CC	CC	CC	CC
0E	0E	0E	0E	0E	0E
63-43	63-43	63-53	63-53	63-53	63-53
06	06	06	06	06	06
63-25	63-25	63-53	63-53	63-53	63-53
34	34	53	53	53	53
71-52	71-52	42	42	42	42
52	52	0D	0D	0D	0D
62-42	62-42	0F	0F	0F	0F
14-34	14-34	14-34	14-34	14-34	14-34
0E	0E	0E	0E	0E	0E
63-53	63-53	14-24	14-24	14-24	14-24
35	35	24	24	24	24
53	53	52	52	52	52
07	07	04	04	04	04
71-52	71-52	64-44	64-44	64-44	64-44
04	04	0F	0F	0F	0F
33-43	33-43	44	44	44	44
0D	0D	0D	0D	0D	0D
44-34	44-34	0D	0D	0D	0D
0E	0E	0E	0E	0E	0E
63-43	63-43	13-33	13-33	13-33	13-33
0E	0E	33	33	33	33
63-53	63-53	14-24	14-24	14-24	14-24
53	53	42	42	42	42
01	01	0F	0F	0F	0F
61-52	61-52	01	01	01	01
0B	0B	01	01	01	01
33-42	33-42	42	42	42	42
25	25	00	00	00	00
44-35	44-35	99	99	99	99
0000	0000	99	99	99	99

= rokade, dus na gegeven zet nog een extra zet intoetsen (+ F!).
Eerste kolom speelt KIM met wit, tweede kolom speelt KIM met zwart.

Reperatoire witspeler.

Datum ingang:

Vervangt:

ervangt: d.d.:

Ref.:

AANVULLINGEN OP MICROCHESS 1.0

Nummer:

Blad:

2 van 6

Gesloten Siciliaan (00DB)	Aljechinverdediging		Pirc-verdediging	
	CC	0F	CC	0F
1 13-33 0F 64-44	44	13-33 0F 64-44	44	13-33 0F 64-44
13-33 12-32 32	0D	71-52 33 06-25	06	64-54 33 13-23
65-45 33	52	52 25	25	54 23
45	52	52	52	54 43
2 06-25 07 71-52	07	06-25 07 71-52	0E	14-34 0E 63-43
76-55 25 01-22	22	64-44 25 13-33	33	71-52 34 06-25
55	56	44	33	52 52
3 11-21 0A 66-56	0A	33-44 0F 44-33	06	06-25 07 71-52
61-51 21 16-26	26	52-44 44 25-33	33	0A 61-51 25 16-26
51	66	44	42	26
4 02-11 04 75-66	04	02-35 04 75-42	06	02-13 04 75-64
72-61 11 05-16	16	44-56 35 33-21	21	72-61 13 05-16
61	53	56	51	51 16
5 14-24 0E 63-53	0E	35-26 04 42-51	0D	10-30 08 67-47
64-54 24 13-23	23	65-45 26 12-32	32	76-55 30 01-22
54	45	45	37	55 22
6 12-32 0C 65-45	0F	04-40 01 73-37	0F	05-23 05 72-54
63-53 32 14-24	24	63-53 40 14-24	24	63-43 23 14-34
53	55	53	53	54 34
7 01-22 06 76-55	06	14-24 0E 63-53	07	34-44 0E 43-33
71-63 22 06-14	14	76-55 24 01-22	22	55-34 44 22-43
63	75	55	64	34 43
8 03-01r 00 74-76r	00	01-13 06 76-64	04	23-34 05 54-43
73-71r 01 04-06r	06	72-63 13 05-14	14	43-34 34 34-43
72	63	63	75	34 43
9 05-14 05 72-63	03	03-01r 00 74-76r	00	04-34 01 73-43
00-01 01	01	73-71r 01 04-06r	06	04-06r 34 99 99 99
(00C0)	99			

Repertoire witspeler.

Datum ingang:
18 juni 1979

Vervangt:

d.d.:

Ref.:

Fer Weber

AANVULLINGEN OP MICROCHESS 1.0

Nummer:

Blad:

3 van 6

Scandinavisch	Weens	Frans doorschuif
(000DB)	CC	44
1 13-33	0F 64-44	0F 64-44
64-44	33 13-33	33 14-34
44	33	43 52
2 33-44	0F 44-33	06-25 71-52
74-44	44 03-33	76-55 01-22
44	52	55 42
3 06-25	07 71-52	02-35 75-42
44-47	25 33-30	72-45 05-32
47	41	45 46
4 16-36	0B 61-41	04-31 73-46
47-36	36 30-41	61-51 16-26
36	71	51 26
5 07-06	03 70-71	31-22 46-55
36-54	06 41-23	71-52 06-25
54	23	22 25
6 14-34	0E 63-43	01-13 76-64
71-52	34 06-25	64-54 13 13-23
52	25	54 23
7 01-22	06 76-55	14-24 63-53
65-55	22 12-22	75-31 02-46
55	22	24 46
8 02-24	04 75-53	22-21 55-56
66-56	24 11-21	60-50 01 21
56	21	17-27 27
9 25-13	07 52-64	12-32 65-45
75-31	13 02-46	74-63 03-14
(00C0)	99	99 99

Répertoire witspeler.

Répertoire zwaartspeler.

AANVULLINGEN OP MICROCHESS 1.0

Nummer:

Blad:

4 van 6

Hollands		Siciliaan Najdorf		Nimzo-Indisch	
(000DB)	CC	43	CC	44	CC
1 14-34	0E	63-43	0F	64-44	0D
62-42	34	15-35	35	12-32	32
42	56	56	45	55	52
2 11-21	0A	66-56	06	76-55	0E
71-52	21	06-25	25	13-23	23
52	66	52	54	43	53
3 02-11	04	75-66	04	63-43	0D
61-51	11	16-26	26	32-43	43
51	55	51	34	43	36
4 01-22	06	76-55	04	55-43	06
72-61	22	05-16	16	06-25	25
61	75	22-34	06	13-23	0F
5 03-01r 00	74-76r 00	06	71-52	09	64-54
73-71r 01	04-06r 06	67-57	25	73-71r 23	00
72	42	05-41	05	04-06r 06	04
6 15-35	0D	62-42	0E	72-36	0D
64-54	35	13-23	23	05-33	36
54	52	63-53	41	14-24	24
7 06-25	07	71-52	07	12-32	0F
76-55	25	01-22	22	05-14	14
55	33	72-63	32	05-14	14
55-47	44	01-22	01	73-55	01
8 34-44	0E	43-33	07	04-22	01
55-47	44	22-30	30	74-65	22
47	63	63	65	03-12	12
9 22-14	06	55-63	0D	74-72r 07	01
65-45	14	12-32	32	76-64	05
99	99	99	99	01-13	13
				36-47	35
					99

Repertoire zwartspeler

Datum ingang:
18 juni 1979

Vervangt:
-

d.d.:

Ref.:

Fer Weber

AANVULLINGEN OP MICROCHESS 1.0

Nummer:

Blad:

5 van 6

Spaans Tsjigorin		Engelse aanval		Neo-Cunningham	
(000DB)	CC	CC	CC	CC	CC
1 13-33	0F	64-44	44	13-33	0F
63-43	33	14-34	0F	63-43	33
43	55	55	55	43	43
2 01-22	06	76-55	07	01-22	06
76-55	22	01-22	22	76-55	22
55	31	55	31	55	31
3 02-46	04	75-31	09	02-46	04
67-57	46	10-20	20	67-57	46
57	40	40	40	57	40
4 46-37	04	31-40	06	46-37	04
71-52	37	06-25	25	71-52	37
52	75	75	75	52	64
5 03-01r	00	74-76r	04	04-13	01
72-63	01	05-14	14	66-46	13
63	74	74	74	46	51
6 02-03	02	75-74	0B	37-26	04
66-46	03	11-31	31	72-63	26
46	51	51	51	05-14	14
7 37-26	04	40-51	0E	03-01r	00
64-54	26	13-23	23	73-71r	01
54	52	52	52	72	52
8 15-25	0D	62-52	00	15-25	0D
73-71r	25	04-06r	06	64-44	25
72	43	43	44	13-33	33
9 14-34	0E	63-43	07	33-44	0F
55-47	34	22-30	30	75-31	44
(00C0)	99	99	99	99	99

Repertoire zwartspeler

Datum ingang:

18 juni 1979

Vervangt:

-

d.d.:

-

Ref.:

Fer Weber

AANVULLINGEN OP MICROCHESS 1.0

Nummer:

Blad:

6 van 6

Orang Oetan (Englisch)

(00DB)	CC	41
1 16-36	0A	61-41
63-43	36	14-34
	43	61
2 05-16	05	72-61
62-52	16	15-25
	52	44
3 13-33	0F	64-44
72-36	33	05-41
	36	42
4 02-35	04	75-42
71-63	35	06-14
	63	45
5 12-32	0C	65-45
64-44	32	13-33
	44	33
6 33-44	0F	44-33
36-54	44	41-23
	54	34
7 32-43	0C	45-34
52-43	43	25-34
	43	37
8 04-40	01	73-37
63-51	40	14-26
	51	55
9 01-22	06	76-55
76-64	22	01-13
	99	13
		99

IS ER IEMAND DIE AAN KIM MICROCHESS 1.0 HEEFT ZITTEN
KNUTSELEN (LIEFST MET SUCCES NATUURLIJK) ??????????????
SCHRIJF HET MIJ DAN EENS... FER WEBER
GEBR.WIENERSTR. 139
5913 XS VENLO

Datum ingang:

18 juni 1979

Vervangt:

-

d.d.:

-

Ref.:

Fer Weber

0010: ; ***** FILE 01 *****
0020: ;
0030: ; PATCHES MICRO-ADE DEEL 6.
0040: ; -----
0050: ;
0060: ; AUTHOR S T WOLDRINGH
0070: ; KLIEVERINK 619
0080: ; AMSTERDAM.
0090: ;
0100: ;
0110: ; IN DE 30 FILES WORDEN DE VOLGENDE PATCHES
0120: ; OF MICRO-ADE BESCHREVEN.
0130: ;
0140: ; 1. BY DE CASSETTE-LOAD ROUTINES WERD 1 CHARACTER
0150: ; VAN DE BUFFER VERLOREN , ZOWEL BY HET
0160: ; H-COMMANDO ALS OOK BY DE G NN,MM.
0170: ;
0180: ; 2. IN DE EDITOR IS HET ADRES VAN DE ROUTINE
0190: ; BUFIN VERKEERD GEWEEST.
0200: ;
0210: ; 3. BY HET T3 COMMANDO WORDT NU ZOWEL DE
0220: ; NIEUWE ALS OOK DE OUDE GRENZEN
0230: ; UITGEPRINT.
0240: ;
0250: ; 4. NA EEN CARRIAGE RETURN WORDEN 3 'NULL'
0260: ; CHARACTERS GEPRINT , OM DE TTY DE
0270: ; TYD TE GEVEN NAAR HET BEGIN VAN DE
0280: ; REGEL TERUG TE KEREN.
0290: ;
0300: ; 5. BY HET STARTEN VAN MICRO-ADE WORDT OM DE
0310: ; DATUM GEVRAAGD ; DEZE WORDT BY DE PASS-2
0320: ; EN DE SYMBOL-TABLE PRINTS IN
0330: ; DE KOP GEPLAATST.
0340: ;
0350: ; 6. BY T EN T1 WORDEN PAGINA'S GEPRINT, MET
0360: ; PAGINA-NUMMERS ED.
0370: ;
0380: ; 7. AAN HET EINDE VAN PASS-2 EN NA HET
0390: ; PRINTEN VAN DE SYMBOL-TABLES WORDT DE
0400: ; PAGINA AFGEMAAKT MET BLANCO REGELS
0410: ; (KOST SOMS WEL WAT PAPIER).
0420: ;
0430: ; 8. INDIEN BY PASS-2 PRINT? N GEGEVEN
0440: ; WORDT, WORDT BY BEEINDIGING VAN PASS-2
0450: ; EEN '..' GEPRINT OM AAN TE DUIDEN , DAT ER
0460: ; WEER ID'S INGETIKT KUNNEN WORDEN.
0470: ;
0480: ; 9. DE 24K RAM WERKGEBIED HEEFT EEN NIEUWE
0490: ; VERDELING GEKREGEN TUSSEN SOURCE, TABLES
0500: ; EN OBJECT RUIMTE.
0510: ;
0520: ; 10. DE PAGINAGROOTTE VAN DE PASS-2 LISTING EN
0530: ; INDELING ERVAN ZYN GEWYZIGD (DA 2 CRLF'S
0540: ; NA DE KOP ; 60 REGELS/BLAD EN 4 CRLF'S VOOR
0550: ; DE VOLGENDE KOP).
0560: ;
0570: ; 11. TOEVOEGEN VAN HET T4 EN T5 COMMANDO,
0580: ; ZOWEL MET HET T4 (GESORTEERD OP DE
0590: ; NAAM VAN DE SYMBOLS) ALS OOK MET HET T5
0600: ; (GESORTEERD OP DE ADRESSEN VAN DE SYMBOLS)

0610: ; WORDT NAAST HET SYMBOL EN ZYN ADRES OOK
 0620: ; DE FILENR + REGELNR GEPRINT , WAAR HET
 0630: ; SYMBOL GEDEFINIEERD IS EN DAARNA ALLE
 0640: ; FILENR'S + REGELNR'S , WAAR HET SYMBOL
 0650: ; GEBRUIKT WORDT.
 0660: ;
 0670: ; 12. BY PASS-2 WORDT DE VRAAG 'XREF?'
 0680: ; GESTELD ; INDIEN Y GEANTWOORD WORDT ,
 0690: ; WORDEN DE XREF-ENTRIES AAN DE XRE-TABLE
 0700: ; TOEGEVOEGD, ANDERS NIET. OM IJS ALLEN DE
 0710: ; ID'S-REGELNR'S TE VERKRYGEN , WAAR EEN
 0720: ; EEN SYMBOL GEDEFINIEERD IS , MOET N GEGEVEN
 0730: ; WORDEN. WORDT EEN PASS-2 HERHAALD ZONDER
 0740: ; PASS-1 , DAN MOET OOK N GEANTWOORD
 0750: ; WORDEN , OMDAT ANDERS ALLE XREF'S VAN
 0760: ; PASS-2 DUBBEL IN TABEL ZOUDEN KOMEN.
 0770: ;
 0780: ; OPMERKINGEN.
 0790: ; - DE SYMBOLTABLE ENTRIES ZYN 8 BYTES
 0800: ; LANG GEWORDEN TEGEN VROEGER 6 BYTES.
 0810: ; - PER XREF-ENTRY WORDEN 5 BYTES GEBRUIKT
 0820: ; - BY DE NU GEBRUIKTE VERDELING VAN HET RAM
 0830: ; (5K SYMBOL EN 14K XREF) KUNNEN 640 SYMBOLS
 0840: ; EN 2867 XREF-ENTRIES OPGENOMEN WORDEN.
 0850: ; - MOCHT DE XREF-TABLE OVERLOOPEN DAN WORDT DIT
 0860: ; NIET GEMELED , DOCH WEL VOORKOMEN.
 0870: ;
 0880: ; - BY ALLE PATCHES IS ER VAN UIT GEGAAN, DAT
 0890: ; DE PATCHES OP MICRO-ADE DEEL 1 TM DEEL 5
 0900: ; AANGEBRACHT ZYN (ZIE VORIGE KIMKENNERS)
 0910: ; IS DIT NIET GEBEURD , DAN ZAL GEANALISEERD
 0920: ; MOETEN WORDEN WAAR DEZE PATCHES
 0930: ; PRECIES AANGEBRACHT DIENEN TE WORDEN.
 0940: ;
 0010: ; ***** FILE 02 *****
 0020: ;
 0030: ; IN PATCHES USED FIELDS AND
 0040: ; SUBROUTINES.
 0050: ;
 0060: 15 00 NLO * \$0015
 0070: 16 00 NHI * NLO +01
 0080: 1A 00 LOPAR * \$001A
 0090: 1D 00 HIPAR * \$001D
 0100: 31 00 YCOM * \$0031
 0110: 3F 00 SLO * \$003F
 0120: 40 00 SHI * SLO +01
 0130: 41 00 ELO * SHI +01
 0140: 42 00 EHI * ELO +01
 0150: 4C 00 PASS * \$004C
 0160: 4D 00 PRFLAG * PASS +01
 0170: 54 00 CNT * \$0054
 0180: 55 00 XLO * CNT +01
 0190: 55 00 PAGE * XLO
 0200: 56 00 XHI * PAGE +01
 0210: 56 00 PGN * XHI
 0220: 62 00 ID * \$0062
 0230: 63 00 PMODE * ID +01
 0240: 6D 00 SYMID * \$006D
 0250: 6F 00 SSLO * SYMID +02
 0260: 70 00 SSHI * SSLO +01

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0270:    71 00 SXLO * SSHI +01
0280:    72 00 SXHI * SXLO +01
0290:    73 00 EXLO * SXHI +01
0300:    74 00 EXHI * EXLO +01
0310:    75 00 DATE * EXHI +01
0320:    7B 00 PAGE2 * DATE +06
0330:    7C 00 PGN2 * PAGE2 +01
0340:    7D 00 XRFIND * PGN2 +01
0350:    7E 00 SAVE * XRFIND +01
0360:    00 01 BUFFER * $0100
0370:    31 20 RESTRRT * $2031
0380:    A4 25 PRSYM * $25A4
0390:    E6 25 SETSY * $25E6
0400:    97 27 YSN02 * $2797
0410:    A0 27 MESSY * $27A0
0420:    C1 27 DADS * $27C1
0430:    37 28 FNDSYM * $2837
0440:    8B 29 GETARG * $29BB
0450:    0A 2C MESSG * $200A
0460:    C9 2D HEXAX * $2DC9
0470:    CD 2D HEXOUT * $2DCD
0480:    E7 2D CRLF * $2DE7
0490:    EB 2D HEXSF * $2DEB
0500:    EE 2D OUTSF * $2DEE
0510:    F0 2D OUTCH * $2DFO
0520:    41 2E BUFIN * $2E41
0530:    A0 2E OUTPUT * $2EA0
0540:    ;
0010:    ; ***** FILE 03 *****
0020:    ;
0030: 2000          ORG $2000
0040:    ;
0050: 2000 20 47 25  JSR GETDAY TYPE IN THE DATE
0060: 2003 EA          NOP
0070: 2004 20 3E 25  COLD JSR CLDCRL CLD AND CRLF (C)
0080: 2007 EA          NOP
0090:    ;
0010:    ; ***** FILE 04 *****
0020:    ;
0030: 2050          ORG $2050
0040:    ;
0050: 2050 20 41 2E  JSR BUFIN CORRECT WRONG JSR
0060:    ;
0010:    ; ***** FILE 05 *****
0020:    ;
0030: 217B          ORG $217B
0040:    ;
0050: 217B 4C 04 20  JMP COLD GOTO NEW CLEAR-POINT
0060:    ;
0010:    ; ***** FILE 06 *****
0020:    ;
0030: 232F          ORG $232F
0040:    ;
0050: 232F 4C 3C 35  JMP TABLE GOTO NEW TABLE-ROUTINES
0060:    ;
0010:    ; ***** FILE 07 *****
0020:    ;
0030: 2514          ORG $2514
0040:    ;
0050:    ; USE THE OLD SPACE OF TABLE FOR

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0060:           ; NEW SUBROUTINES.
0070:           ;
0080:           ;
0090:           ; ROUTINES TO RESET THE XREF-POINTERS
0100:           ;
0110: 2514 A9 00  SETSY2 LDAIM $00
0120: 2516 85 6F   STAZ  SSLO
0130: 2518 85 54   STAZ  CNT
0140: 251A A9 05   LDAIM $05
0150: 251C 85 71   STAZ  SXLO
0160: 251E AD A9 2E   LDA   SYMXRF
0170: 2521 85 70   STAZ  SSHI
0180: 2523 85 72   STAZ  SXHI
0190: 2525 60      RTS
0200:           ;
0210:           ;
0220:           ; ROUTINES TO ADD A TO XREF-POINTERS.
0230:           ;
0240: 2526 A2 00  DADS2 LDIXIM $00
0250: 2528 A9 05  DADX2 LDAIM $05      ADD LENGTH OF ENTRY
0260: 252A 18      DADA2 CLC
0270: 252B 75 6F   ADCZX SSLO
0280: 252D 95 6F   STAZX SSLO
0290: 252F B5 70   LDAZX SSHI
0300: 2531 69 00   ADCIM $00
0310: 2533 95 70   STAZX SSHI
0320: 2535 B5 6F   LDAZX SSLO
0330: 2537 C5 73   CMPZ  EXLO
0340: 2539 B5 70   LDAZX SSHI
0350: 253B E5 74   SECZ  EXHI
0360: 253D 60      RTS
0370:           ;
0380:           ;
0390:           ; ROUTINE TO CLEAR DEC-MODE
0400:           ; AND TO DO A CRLF
0410:           ;
0420: 253E D8      CLDCRL CLD
0430: 253F 20 E7 2B   JSR   CRLF
0440: 2542 A9 FF   LDAIM $FFF     RESET PAGE-MODE
0450: 2544 85 63   STAZ  PMODE
0460: 2546 60      RTS
0470:           ;
0480:           ;
0490:           ; ROUTINE TO ACCEPT THE DATE
0500:           ; AND TO STORE IT IN ZERO-PAGE.
0510:           ;
0520: 2547 20 3E 25  GETDAY JSR   CLDCRL MAKE SURE OF CLD
0530: 254A A0 00   LDYIM $00      TYPE 'ENTER DATE'
0540: 254C B9 67 25  GETDY1 LDAA5 TEKST GET A CHAR
0550: 254F 20 F0 2B   JSR   OUTCH PRINT IT
0560: 2552 C8      INY
0570: 2553 C0 14   CPYIM $14      ALL DONE ?
0580: 2555 D0 F5   BNE   GETDY1 IF NOT NEXT
0590: 2557 20 41 2E   JSR   BUFIN ACCEPT DATE VIA BUFIN
0600: 255A A2 00   LDXIM $00
0610: 255C BD 00 01  GETDY2 LDAA5 BUFFER TRANSFER DATE
0620: 255F 95 75   STAZX DATE   TO ZERO-PAGE
0630: 2561 E8      INX
0640: 2562 E0 06   CPXIM $06      ALL DONE
0650: 2564 D0 F6   BNE   GETDY2 IF NOT , NEXT

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0660: 2566 60           RTS      FINISHED.

0670:                   ;
0680:                   ;
0690:                   ; TABLE OF DATE TEXT
0700:                   ;
0710: 2567 45           TEKST   =   'E
0720: 2568 4E           =   'N
0730: 2569 54           =   'T
0740: 256A 45           =   'E
0750: 256B 52           =   'R
0760: 256C 20           =   '
0770: 256D 44           =   'D
0780: 256E 41           =   'A
0790: 256F 54           =   'T
0800: 2570 45           =   'E
0810: 2571 20           =   '
0820: 2572 28           =   '(
0830: 2573 44           =   'D
0840: 2574 44           =   'D
0850: 2575 4D           =   'M
0860: 2576 4D           =   'M
0870: 2577 59           =   'Y
0880: 2578 59           =   'Y
0890: 2579 29           =   ')'
0900: 257A 20           =   '

0910:                   ;
0920:                   ;
0930:                   ; ROUTINE TO FILL THE LAST
0940:                   ; PAGE OF THE PASS-2 IN ORDER
0950:                   ; TO GET A FULL PAGE AS LAST ONE.
0960:                   ;
0970: 257B A5 4D           ENDPAG LDAZ  PRFLAG WAS THERE A PRT
0980: 257D D0 0D           =       BNE    ENDPG3
0990: 257F E6 56           ENDPG1 INCZ  PON
1000: 2581 10 06           =       BPL    ENDPG2
1010: 2583 20 E7 2D           JSR    CRLF  PRINT A DUMMY LINE
1020: 2586 4C 7F 25           JMP    ENDPG1
1030: 2589 20 8F 25           ENDPG2 JSR    4CRLF  JUST 4 MORE LINES
1040: 258C 4C 31 20           ENDPG3 JMP    RESTRT AND FINISHED
1050:                   ;
1060:                   ;
1070:                   ; ROUTINE TO PRINT 4 CRLF'S
1080:                   ;
1090: 258F A0 03           4CRLF  LDYIM $03  SET Y TO 4 TIMES
1100: 2591 20 E7 2D           4CRLF1 JSR    CRLF
1110: 2594 88           DEY
1120: 2595 D0 FA           BNE    4CRLF1 ALL DONE ?
1130: 2597 60           RTS    YES.

1140:                   ;
1150:                   ;
1160:                   ; ROUTINE OF SOME LOST
1170:                   ; INSTRUCTIONS.
1180:                   ;
1190: 2598 20 CD 2D           PRTID  JSR    HEXOUT PRINT IT
1200: 259B 20 EE 2D           =       JSR    OUTSP AND A SPACE
1210: 259E 60           RTS

1220:                   ;
1230:                   ;
1240:                   ; TEXT FOR XREF QUESTION.
1250:                   ;

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1260: 259F 58      TEXT    =    'X
1270: 25A0 52      =    'R
1280: 25A1 45      =    'E
1290: 25A2 46      =    'F
1300: 25A3 3F      =    '?'
1310:
0010:             ; **** FILE 08 ****
0020:
0030: 25EC          ORG    $25EC
0040:
0050: 25EC A9 08    LDAIM  $08    XLO = SLO + 08
0060:
0010:             ; **** FILE 09 ****
0020:
0030: 25FB          ORG    $25FB
0040:
0050: 25FB 4C 90 33  MAIN   JMP    RESSYM RESET SYMBOL-ADR
0060: 25FB EA       MAINR  NOF
0070:
0010:             ; **** FILE 0A ****
0020:
0030: 2622          ORG    $2622
0040:
0050: 2622 20 A4 33  JSR    SPECIN GOTO SPECIAL BUFIN
0060:
0010:             ; **** FILE 0B ****
0020:
0030: 26FB          ORG    $26FB
0040:
0050: 26FB 20 45 37  JSR    QUEST  ASK XREF AND SAVE-ID
0060:
0010:             ; **** FILE 0C ****
0020:
0030: 271D          ORG    $271D
0040:
0050: 271D 4C 7B 25  JMP    ENDPAG GOTO MAKE THE PAGE FULL
0060:
0010:             ; **** FILE 0D ****
0020:
0030: 272F          ORG    $272F
0040:
0050: 272F 20 B5 33  JSR    GTARG  GOTO SPECIAL GETARG
0060:
0010:             ; **** FILE 0E ****
0020:
0030: 27C3          ORG    $27C3
0040:
0050: 27C3 A9 08    DADX   LDAIM  $08    ADD 8
0060:
0010:             ; **** FILE 0F ****
0020:
0030: 2837          ORG    $2837
0040:
0050: 2837 A9 F8    FNDSBL LDAIM  $F8    LENGTH IS 8
0060:
0010:             ; **** FILE 10 ****
0020:
0030: 287F          ORG    $287F
0040:
0050: 287F 20 B5 33  JSR    GTARG  GET ARG WITHOUT

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0060: ; STORING A XREF
0070: ;
0010: ; **** FILE 11 ****
0020: ;
0030: 2894 ORG $2894
0040: ;
0050: 2894 4C FD 33 ADTABL JMP INSID ALSO INSERT THE
0060: 2897 EA ADTBLR NOP SYMID IN SYMBOL-ENTRY
0070: ;
0010: ; **** FILE 12 ****
0020: ;
0030: 29B0 ORG $29B0
0040: ;
0050: 29B0 4C 5C 34 OKS1 JMP STRXRF STORE XREF-ENTRY
0060: 29B3 EA NOP
0070: 29B4 EA NOP
0080: ;
0010: ; **** FILE 13 ****
0020: ;
0030: 29FD ORG $29FD
0040: ;
0050: 29FD 20 E4 33 JSR MACRLF AT THE END OF A PAGE
0060: 2A00 EA NOP 4 SPACE LINES FOR CUTTING
0070: 2A01 EA NOP (IF PRFLAG IS ON)
0080: 2A02 EA NOP
0090: 2A03 EA NOP
0100: 2A04 EA NOP
0110: ;
0010: ; **** FILE 14 ****
0020: ;
0030: 2A12 ORG $2A12
0040: ;
0050: 2A12 20 00 35 JSR TOPPRT PRINT NEW SORT OF
0060: 2A15 EA NOP HEADER OF THE PAGE
0070: 2A16 EA NOP
0080: 2A17 EA NOP
0090: 2A18 EA NOP
0100: ;
0010: ; **** FILE 15 ****
0020: ;
0030: 2A2D ORG $2A2D
0040: ;
0050: 2A2D A0 02 LDYIM $02 THREE CRLF AFTER HEADER
0060: ;
0010: ; **** FILE 16 ****
0020: ;
0030: 2A35 ORG $2A35
0040: ;
0050: 2A35 A9 C4 LDAIM $C4 CORRECT NUMBERS OF LINES
0060: ; DUE TO THE 4 CRLF'S
0070: ;
0010: ; **** FILE 17 ****
0020: ;
0030: 2C4E ORG $2C4E
0040: ;
0050: 2C4E 40 = $40 NO 'PAGE' YET
0060: ;
0010: ; **** FILE 18 ****
0020: ;
0030: 2E11 ORG $2E11

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0040: ; JSR OUT-OD OUTPUT OD + 3 * 00
0050: 2E11 20 EC 33 ; **** FILE 19 ****
0060: ; ORG $2EA3
0070: ; NEW RAM-DIVISIONS
0080: ; SOURCM = $53 SOURCE-TABLE - 1
0090: ; SOURCE = $54 START OF SOURCE-TABLE
0100: ; SOURCF = $64 END OF SOURCE-TABLE
0110: ; SYMBOL = $40 START OF SYMBOL-TABLE
0120: ; SYMF = $54 END OF SYMBOL-TABLE
0130: ; OBJECT = $9C START OF OBJECT-BUFFER
0140: ; SYMXRF = $64 START OF XREF-TABLE
0150: ; SYMMAX = $9C END OF XREF-TAB
0160: ; NOP
0170: ; ERID JSR PRTID REPLACE INSTRUCTIONS
0180: ; **** FILE 1A ****
0190: ; ORG $2EE9
0200: ; BNE ERID JUMP TO NEW ERID
0210: ; **** FILE 1B ****
0220: ; ORG $30D9
0230: ; SBCIM $06 CORRECT SMALL ERROR
0240: ; **** FILE 1C ****
0250: ; ORG $3390
0260: ; RESSYM LDYIM $00
0270: ; STYZ XRFIND CLEAR XRF-FLAG
0280: ; STYZ ELO ALSO RESET ELO
0290: ; STYZ SYMID
0300: ; STYZ SYMID +01
0310: ; STYZ SXLO
0320: ; LDA SYMXRF
0330: ; STAZ SXHI
0340: ; JMP MAINR AND RETURN
0350: ; ****
0360: ; ROUTINE TO PRINT A POINT DURING PASS-2
0370: ; IF THE PRINT IS OFF , TO RECOGNISE THE
0380: ; END OF THE PASS-2.
0390: ; ****
0400: ; SPECIN LDAZ PASS CHECK IF PASS-2
0410: ; BNE NOPUNT IF NOT, NO POINT
0420: ; LDAZ PRFLAG CHECK IF PRT IS OFF
0430: ; BEQ NOPUNT IF NOT , NO POINT

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0290: 33AC A9 2E          LDAIM ','
0300: 33AE 20 F0 2D          JSR     DUTCH
0310: 33B1 20 41 2E          NOPUNT JSR     BUFIN  GET ID'S
0320: 33B4 60          RTS
0330: ;
0340: ;
0350: ; ROUTINE TO GET A ARGUMENT
0360: ; WITHOUT STORING A XREF
0370: ;
0380: 33B5 20 BE 33          GTARG  JSR     PSSXLO SAVE SXLO ETC
0390: 33B8 20 8B 29          JSR     GETARG FIND SYMBOL
0400: 33BB 20 D1 33          JSR     FLSXLO RESTORE SXLO ETC
0410: ;
0420: ;
0430: ; ROUTINE TO SAVE SXLO , SXHI,
0440: ; EXLO AND EXHI
0450: ;
0460: 33BE 48          PSSXLO PHA      SAVE ACCUM
0470: 33BF A5 71          LDAZ    SXLO
0480: 33C1 85 7E          STAZ    SAVE
0490: 33C3 A5 72          LDAZ    SXHI
0500: 33C5 85 7F          STAZ    SAVE +01
0510: 33C7 A5 73          LDAZ    EXLO
0520: 33C9 85 80          STAZ    SAVE +02
0530: 33CB A5 74          LDAZ    EXHI
0540: 33CD 85 81          STAZ    SAVE +03
0550: 33CF 68          PLA      RESTORE ACCUM
0560: 33D0 60          RTS
0570: ;
0580: ;
0590: ; ROUTINE TO RESTORE SXLO,
0600: ; SXHI, EXLO, EXHI.
0610: ;
0620: 33D1 48          PLSXLO PHA      SAVE ACCUM
0630: 33D2 A5 81          LDAZ    SAVE +03
0640: 33D4 85 74          STAZ    EXHI
0650: 33D6 A5 80          LDAZ    SAVE +02
0660: 33D8 85 73          STAZ    EXLO
0670: 33DA A5 7F          LDAZ    SAVE +01
0680: 33DC 85 72          STAZ    SXHI
0690: 33DE A5 7E          LDAZ    SAVE
0700: 33E0 85 71          STAZ    SXLO
0710: 33E2 68          PLA      RESTORE ACCUM, ...
0720: 33E3 60          RTS
0730: ;
0740: ;
0750: ; ROUTINE TO CHECK IF PRFLAG IS OFF
0760: ; IF NOT , TO PRINT 4 CRLF'S
0770: ;
0780: 33E4 A5 4D          M4CRLF LDAZ    PRFLAG CHECK FLAG
0790: 33E6 D0 03          BNE     M4CRL1
0800: 33E8 20 8F 25          JSR     4CRLF PRINT THEM
0810: 33EB 60          M4CRL1 RTS      NO PRINT
0820: ;
0830: ;
0840: ; ROUTINE TO PRINT A CARRIAGE RETURN
0850: ; AND 3 TIMES A NULL TO GIVE THE TTY
0860: ; TIME TO RETURN TO THE BEGINNING OF
0870: ; THE LINE.
0880: ;

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0890: 33EC 20 A0 2E OUT-0D JSR OUTPUT A CR
0900: 33EF A9 03 LDAIM $03 SET COUNT TO 3
0910: 33F1 85 7E STAZ SAVE USE SAVE-FIELD
0920: 33F3 A9 00 OUT0D1 LDAIM $00
0930: 33F5 20 A0 2E JSR OUTPUT
0940: 33F8 C6 7E DECZ SAVE COUNT - 1
0950: 33FA D0 F7 BNE OUT0D1 NOT FINISHED YET
0960: 33FC 60 RTS READY.

0970: ;
0980: ;
0990: ; ROUTINE TO INSERT THE SYMID
1000: ; IN THE SYMBOL-TABLE AND TO
1010: ; PLACE TO FIRST XREF OF THIS
1020: ; SYMBOL IN THE XREF-TABLE
1030: ;
1040: 33FD A2 00 INSID LDIXIM $00 FOR THE IX-INSTR
1050: 33FF 91 41 STAIY ELO STORE PC
1060: 3401 C8 INY Y ON SYMID-PLACE
1070: 3402 A5 6D LDAZ SYMID GET SYMID
1080: 3404 91 41 STAIY ELO AND STORE IT
1090: 3406 09 80 ORAIM $80 MAKE BIT ' = 1
1100: 3408 81 71 STAIX SXLO
1110: 340A 20 4A 34 JSR INSXLO ADD 1 TO SXLO
1120: 340D C8 INY
1130: 340E A5 6E LDAZ SYMID +01
1140: 3410 91 41 STAIY ELO THE SECOND PART OF IT
1150: 3412 81 71 STAIX SXLO
1160: 3414 20 29 34 JSR STRRST AND STORE THE REST
1170: 3417 18 CLC ADD 1 TO SYMID
1180: 3418 A5 6E LDAZ SYMID +01
1190: 341A 69 01 ADCIM $01
1200: 341C 85 6E STAZ SYMID +01
1210: 341E A5 6D LDAZ SYMID
1220: 3420 69 00 ADCIM $00
1230: 3422 85 6D STAZ SYMID
1240: 3424 A2 02 LDIXIM $02 RESTORE INSTRUCTIONS
1250: 3426 4C 97 28 JMP ADTBLR AND GO BACK

1260: ;
1270: ;
1280: ; ROUTINE TO STORE THE ID AND
1290: ; THE LINE-NUMBERS IN THE XREF-TABLE
1300: ;
1310: 3429 20 4A 34 STRRST JSR INSXLO ADD 1 TO SXLO
1320: 342C A5 62 LDAZ ID GET ID
1330: 342E 81 71 STAIX SXLO AND STORE IT
1340: 3430 20 4A 34 JSR INSXLO
1350: 3433 A5 16 LDAZ NHI HIGH-ORDER NUMBER
1360: 3435 81 71 STAIX SXLO AND STORE IT
1370: 3437 20 4A 34 JSR INSXLO
1380: 343A A5 15 LDAZ NLO GET LOW-ORDER NUMBER
1390: 343C 81 71 STAIX SXLO AND STORE IT
1400: 343E 20 4A 34 JSR INSXLO
1410: 3441 A5 71 LDAZ SXLO AJUST MAX-POINTERS
1420: 3443 85 73 STAZ EXLO
1430: 3445 A5 72 LDAZ SXHI
1440: 3447 85 74 STAZ EXHI
1450: 3449 60 RTS

1460: ;
1470: ;
1480: ; ROUTINE TO ADD 1 TO SXLO

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1490: ;           INSXLO INCZ SXLO
1500: 344A E6 71     BNE INSXLR
1510: 344C D0 0D     INCZ SXHI ALSO 1 BY HIGH-ORDER
1520: 344E E6 72     LDAZ SXHI CHECK IF NOT TOO FAR
1530: 3450 A5 72     CMP SYMMAX
1540: 3452 CD AA 2E   BNE INSXLR NOT TOO FAR
1550: 3455 D0 04     DECZ SXLO FORCE SXLO AND SXHI
1560: 3457 C6 71     DECZ SXHI TO MAX - 1
1570: 3459 C6 72
1580: 345B 60           INSXLR RTS
1590: ;
1600: ;
1610: ; ROUTINE TO STORE A XREF
1620: ; ENTRY IN THE TABLE WITH
1630: ; SYMID FROM FOUND SYMBOL
1640: ; STRXRF LDAZ XRFIND CHECK IF BLOCKED
1650: 345C A5 7D     BNE STRXF1
1660: 345E D0 12     LDXIM $00
1670: 3460 A2 00
1680: 3462 C8           INY
1690: 3463 B1 3F     LDAIY SLO GET SYMID
1700: 3465 B1 71     STAIX SXLO AND STORE IT
1710: 3467 20 4A 34   JSR INSXLO
1720: 346A C8           INY
1730: 346B B1 3F     LDAIY SLO GET LAST PART
1740: 346D B1 71     STAIX SXLO AND STORE IT
1750: 346F 20 29 34   JSR STRRST
1760: 3472 A4 31     STRXF1 LDYZ YCOM RESTORE INSTR.
1770: 3474 B9 00 01   LDAAY BUFFER
1780: 3477 4C B3 29   JMP OKS1 AND RETURN
1790: ; ***** FILE 1D *****
0010: ;
0020: ;
0030: ; THE AREA OF 3480-3500 MUST BE KEPT FREE
0040: ; BECAUSE IT IS USED BY THE V-COMMAND
0050: ; TO MAKE SURE OF THAT THIS FILE WILL BE
0060: ; GIVEN A ORG OF 3500.
0070: ; ORG $3500
0080: 3500
0090: ;
0100: ; ROUTINE TO PRINT THE TOP OF
0110: ; A PASS-2 ASSEMBLYLIST.
0120: ;
0130: 3500 A5 4D     TOPPRT LDAZ PRFLAG CHECK IF NO PRINT
0140: 3502 D0 35     BNE TOPPT5
0150: 3504 A0 23
0160: 3506 B9 0A 2C   TOPPT1 LDYIM $23 PRINT FIRST PART
0170: 3509 C9 40     LDAAY MESSG GET A CHAR
0180: 350B F0 06     CMPIM $40 END-CHAR ?
0190: 350D 20 F0 2D   BEQ TOPPT2 IF SO, STOP
0200: 3510 C8           JSR DUTCH IF NOT PRINT IT
0210: 3511 D0 F3     INY NEXT ONE
0220: 3513 20 EE 2D   TOPPT2 BNE TOPPT1
0230: 3516 20 EE 2D   JSR OUTSP TWO SPACE
0240: 3519 A2 00
0250: 351B B5 75     TOPPT3 LDXIM $00 PRINT THE DATE
0260: 351D 20 F0 2D   LDAZX DATE GET A DATE-NUMB
0270: 3520 E8           JSR DUTCH PRINT IT
0280: 3521 E0 06     INX NEXT ONE
0290: 3523 D0 F6     CPXIM $06 DONE ?
                           BNE TOPPT3 IF NOT, GO ON

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0300: 3525 20 EE 2D      JSR    OUTSP
0310: 3528 20 EE 2D      JSR    OUTSP
0320: 352B C8      TOPPT4 INY      GET NEXT CHAR
0330: 352C B9 0A 2C      LDAIY  MESSG  OF HEADER
0340: 352F C9 40      CMFIM  $40
0350: 3531 F0 06      BEQ    TOPPT5
0360: 3533 20 F0 2D      JSR    OUTCH
0370: 3536 4C 2B 35      JMP    TOPPT4 GOTO NEXT ONE
0380: 3539 A9 00      TOPPT5 LDAIM $00    FORCE BEQ ON RETURN
0390: 353B 60      RTS

0400: ;
0410: ;
0420: ; ROUTINE TO DETERMEN WHAT KIND OF
0430: ; TABLE PROCESSING IS WANTED AND
0440: ; TO EXECUTE THE DESIRED COMMAND
0450: ;

0460: 353C A6 1A      TABLE  LDXZ  LOPAR
0470: 353E E0 02      CPXIM $02    ONLY ADRESSES ?
0480: 3540 F0 04      BEQ    TABLE1
0490: 3542 E0 03      CPXIM $03    A COMPLETE TABLEPRINT ****?
0500: 3544 D0 1D      BNE    TABLE3 IF SO , ANALYSE IT
0510: 3546 20 F9 36      TABLE1 JSR    PRTS1 PRINT ADRESSES
0520: 3549 A6 1A      LDXZ  LOPAR ONLY A PRINT ?
0530: 354B E0 02      CPXIM $02
0540: 354D F0 11      BEQ    TABLE2 YES, THEN FINITO
0550: 354F A5 1B      LDAZ  LOPAR +01 NO, ALSO A CHANGE
0560: 3551 85 41      STAZ  ELO
0570: 3553 A5 1E      LDAZ  HIPAR +01
0580: 3555 85 42      STAZ  EHI
0590: 3557 20 E7 2D      JSR    CRLF
0600: 355A A2 02      LDXIM $02    FORCE A NEW PRINT
0610: 355C 86 1A      STXZ  LOPAR OF THE ADDRESSES
0620: 355E D0 E6      BNE    TABLE1
0630: 3560 4C 31 20      TABLE2 JMP    RESTRT AND RETURN TO EDITOR
0640: 3563 A9 00      TABLE3 LDAIM $00    SET COUNTER
0650: 3565 85 7B      STAZ  PAGE2 TO INITIAL VALUES
0660: 3567 85 7C      STAZ  PGN2
0670: 3569 20 85 35      JSR    SORT1 SORT SYMBOLTABLE
0680: 356C A6 1A      LDXZ  LOPAR
0690: 356E E0 03      CPXIM $03
0700: 3570 30 09      BMI    TABLE4 ONLY SYMBOLPRT
0710: 3572 20 CD 35      JSR    SORT2 SORT XREFTABLE
0720: 3575 20 03 36      JSR    PRTXRF PRINT XREF
0730: 3578 4C 7E 35      JMP    TABLE5 AND RETURN
0740: 357B 20 B7 36      TABLE4 JSR    PRNT PRINT SYMBOLS
0750: 357E A5 7C      TABLE5 LDAZ  PGN2 FORCE ENDPG1 TO
0760: 3580 85 56      STAZ  PGN FILL UP THE PAGE
0770: 3582 4C 7F 25      JMP    ENDPG1

0780: ;
0790: ;
0800: ; ROUTINE TO SORT THE SYMBOL-TABLE
0810: ; ON ADDRESSES IF LOPAR IS ODD
0820: ; OR ON SYMBOLS IF LOPAR IS EVEN
0830: ;

0840: 3585 20 E6 25      SORT1  JSR    SETSY ESET SYMBOLPOINTERS
0850: 3588 A5 1A      LOOPT  LDAZ  LOPAR ADDRESSES OR SYMB
0860: 358A 4A      LSRA
0870: 358B B0 11      BCS    LOOPB
0880: 358D A0 00      LDYIM $00
0890: 358F B1 55      NEXTY  LDAIY XLO    COMPARE

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0900: 3591 D1 3F	CMPIY SLO	FOR
0910: 3593 90 16	BCC MOVEX	ALFA
0920: 3595 D0 27	BNE LESS	SORT
0930: 3597 C8	INY	
0940: 3598 C0 04	CPYIM \$04	ALL CHAR COMPARED
0950: 359A D0 F3	BNE NEXTY	IF NOT, NEXT
0960: 359C F0 20	BEQ LESS	IF SO, NO MOVE
0970: 359E A0 04	LOOPB LDYIM \$04	
0980: 35A0 B1 55	LDAIY XLO	COMPARE
0990: 35A2 D1 3F	CMPIY SLO	
1000: 35A4 C8	INY	FOR ADDRES
1010: 35A5 B1 55	LDAIY XLO	SORT
1020: 35A7 F1 3F	SECIY SLO	
1030: 35A9 B0 13	BCS LESS	
1040: 35AB A0 07	MOVEX LDYIM \$07	EXCHANGE ENTRIES
1050: 35AD B1 3F	MOVET LDAIY SLO	GET ONE OF SLO
1060: 35AF 48	PHA	SAVE IT
1070: 35B0 B1 55	LDAIY XLO	AND ONE OF XLO
1080: 35B2 91 3F	STAIY SLO	STORE IT IN SLO
1090: 35B4 68	PLA	GET SAVED SLO
1100: 35B5 91 55	STAIY XLO	AND STORE IT IN XLO
1110: 35B7 88	DEY	NEXT ONE
1120: 35B8 10 F3	BPL MOVET	IF STILL ANY
1130: 35BA A9 01	LDAIM \$01	INDICATE A MOVE
1140: 35BC 85 54	STAZ CNT	
1150: 35BE 20 C1 27	LESS JSR DADS	SLO = SLO + 8
1160: 35C1 A2 16	LDXIM \$16	
1170: 35C3 20 C3 27	JSR DADX	XLO = XLO + 8
1180: 35C6 90 C0	BCC LOOPT	IF STILL ENTRIES, GO ON
1190: 35C8 A6 54	LDXZ CNT	ANY CHANGES ?
1200: 35CA D0 B9	BNE SORT1	IF SO, FROM THE START
1210: 35CC 60	RTS	IF NOT READY
1220:	;	
0010:	;	***** FILE 1E *****
0020:	;	
0030:	;	ROUTINE TO SORT THE XREFTABLE ON
0040:	;	SYMID, ID, LINE-NUMBERS.
0050:	;	
0060: 35CD 20 14 25	SORT2 JSR SETSY2	RESET XREFPOINTERS
0070: 35D0 A0 00	LOOPT2 LDYIM \$00	
0080: 35D2 B1 71	NEXTY2 LDAIY SXLO	
0090: 35D4 D1 6F	CMPIY SSLO	
0100: 35D6 90 09	BCC MOVX2	IF SSLO < SXLO
0110: 35D8 D0 1A	BNE LESS2	IF SSLO > SXLO
0120: 35DA C8	INY	COMPARE NEXT ENTRY
0130: 35DB C0 05	CPYIM \$05	ALL CHAR HAD ?
0140: 35DD D0 F3	BNE NEXTY2	IF NOT NEXT ONE
0150: 35DF F0 13	BEQ LESS2	IF YES, A EQUAL ONE
0160: 35E1 A0 04	MOVX2 LDYIM \$04	EXCHANGE SSLO
0170: 35E3 B1 6F	MOVET2 LDAIY SSLO	AND SXLO
0180: 35E5 48	PHA	
0190: 35E6 B1 71	LDAIY SXLO	
0200: 35E8 91 6F	STAIY SSLO	
0210: 35EA 68	PLA	
0220: 35EB 91 71	STAIY SXLO	
0230: 35ED 88	DEY	
0240: 35EE 10 F3	BPL MOVET2	
0250: 35F0 A9 01	LDAIM \$01	INDICATE A MOVE
0260: 35F2 85 54	STAZ CNT	
0270: 35F4 20 26 25	LESS2 JSR DADS2	SSLO = SSLO + 5

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0280: 35F7 A2 02          LDXIM $02      SXLO = SXLO + 5
0290: 35F9 20 28 25       JSR DADX2
0300: 35FC 90 D2          BCC LOOPT2  STILL ENTRIES
0310: 35FE A6 54          LDXZ CNT   NO CHANGES ?
0320: 3600 D0 CB          BNE SORT2  YES
0330: 3602 60              RTS      NO

0340: ;
0350: ;
0360: ; ROUTINE TO PRINT OUT A
0370: ; LIST OF ALL THE SYMBOLS, THEIR
0380: ; ADDRESSES, THEIR LINE-NUMBERS AND
0390: ; THE LINE-NUMBERS WHERE THE SYMBOL
0400: ; IS USED.
0410: ;
0420: 3603 20 E6 25          PRTXRF JSR  SETSY  RESET SYMBOLPOINTERS
0430: 3606 20 EB 36          JSR  PRTSO  PRINT FIRST HEADER
0440: 3609 20 A4 25          PRTXF1 JSR  PRSYM  PRINT THE SYMBOL
0450: 360C A0 04          LDYIM $04
0460: 360E B1 3F          LDAIY SLO
0470: 3610 AA              TAX
0480: 3611 C8              INY
0490: 3612 B1 3F          LDAIY SLO
0500: 3614 20 C9 2D          JSR  HEXAX  AND ITS ADDRESS
0510: 3617 20 14 25          JSR  SETSY2 SET XREFPOINTERS
0520: 361A C8              INY
0530: 361B B1 3F          LDAIY SLO  GET SYMID
0540: 361D 09 80          ORAIM $80  MAKE BIT7 = 1
0550: 361F 85 6D          STAZ  SYMID  SAVE IT
0560: 3621 C8              INY
0570: 3622 B1 3F          LDAIY SLO
0580: 3624 85 6E          STAZ  SYMID +01
0590: 3626 20 6F 36          JSR  FNDXRF SEARCH FOR IT
0600: 3629 20 98 36          JSR  PRTSYM PRINT IT
0610: 362C 20 14 25          JSR  SETSY2 RESET XREFPOINTERS
0620: 362F A5 6D          LDAZ  SYMID
0630: 3631 29 7F          ANDIM $7F  MAKE BIT7 = 0
0640: 3633 85 6D          STAZ  SYMID
0650: 3635 20 6F 36          JSR  FNDXRF FIND IT
0660: 3638 F0 0A          BEQ   PRTXF2 ONE IS FOUND
0670: 363A 20 DF 36          JSR  PRTLIN PRINT THE LINE
0680: 363D 20 C1 27          JSR  DADS  GOTO NEXT SYMBOL
0690: 3640 90 C7          BCC   PRTXF1 STILL ONE IN THE TABLE
0700: 3642 B0 2A          BCS   PRTXF7 ALL DONE
0710: 3644 A9 FB          PRTXF2 LDAIM $FB  FOUR XREF ON A LINE
0720: 3646 85 54          STAZ  CNT
0730: 3648 E6 54          PRTXF3 INCZ  CNT  SPACE LEFT ?
0740: 364A 30 0D          BMI   PRTXF5 YES
0750: 364C 20 DF 36          JSR  PRTLIN NO, PRINT LINE
0760: 364F A0 18          LDYIM $18  PRINT 24 SPACES
0770: 3651 20 EE 2D          PRTXF4 JSR  OUTSP
0780: 3654 88              DEY
0790: 3655 D0 FA          BNE   PRTXF4
0800: 3657 F0 EB          BEQ   PRTXF2
0810: 3659 20 98 36          PRTXF5 JSR  PRTSYM PRINT XREF-ENTRY
0820: 365C 20 26 25          JSR  DADS2 GOTO NEXT ONE
0830: 365F B0 05          BCS   PRTXF6 NO MORE LEFT
0840: 3661 20 6F 36          JSR  FNDXRF SEARCH FOR NEXT
0850: 3664 F0 E2          BEQ   PRTXF3 IF ONE PRT IT
0860: 3666 20 DF 36          PRTXF6 JSR  PRTLIN FINISH LAST LINE
0870: 3669 20 C1 27          JSR  DADS  GOTO NEXT SYMBOL

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0880: 366C 90 9B           BCC   PRTXF1 IF STILL LEFT
0890: 366E 60           PRTXF7 RTS      ALL DONE
0900:                   ;
0910:                   ;
0920:                   ; ROUTINE TO FIND A XREF WITH
0930:                   ; THE SAME ID AS SYMID
0940:                   ;
0950: 366F A0 01           FNDXRF LDYIM $01
0960: 3671 B1 6F           LDAIY SSLO
0970: 3673 C5 6E           CMPZ  SYMID +01
0980: 3675 88           DEY
0990: 3676 B1 6F           LDAIY SSLO
1000: 3678 E5 6D           SBCZ  SYMID
1010: 367A B0 07           BCS   MAYBE EITHER > OR =
1020: 367C 20 26 25           FNDXRF JSR   DADS2 GOTO NEXT ONE
1030: 367F 90 EE           BCC   FNDXRF
1040: 3681 B0 12           BCS   NOGO  NONE FOUND
1050: 3683 A0 00           MAYBE LDYIM $00
1060: 3685 A5 6D           LDAZ  SYMID
1070: 3687 D1 6F           CMPYI SSLO
1080: 3689 D0 0A           BNE   NOGO
1090: 368B A5 6E           LDAZ  SYMID +01
1100: 368D C8           INY
1110: 368E D1 6F           CMPYI SSLO
1120: 3690 D0 03           BNE   NOGO
1130: 3692 A9 00           GOGO  LDAIM $00
1140: 3694 60           RTS
1150: 3695 A9 FF           NOGO  LDAIM $FF
1160: 3697 60           RTS
1170:                   ;
0010:                   ; ***** FILE 1F *****
0020:                   ;
0030:                   ; ROUTINE TO PRINT THE XREF-ENTRY.
0040:                   ;
0050: 3698 20 EE 2D           PRTSYM JSR   OUTSP FIRST TWO SPACES
0060: 369B 20 EE 2D           JSR   OUTSP
0070: 369E A0 02           LDYIM $02
0080: 36A0 B1 6F           LDAIY SSLO GET TAPE-ID
0090: 36A2 20 CD 2D           JSR   HEXOUT PRINT IT
0100: 36A5 A9 2D           LDAIM '-'
0110: 36A7 20 F0 2D           JSR   OUTCH
0120: 36AA C8           INY
0130: 36AB B1 6F           LDAIY SSLO GET LINENUMB
0140: 36AD 48           PHA
0150: 36AE C8           INY
0160: 36AF B1 6F           LDAIY SSLO
0170: 36B1 AA           TAX
0180: 36B2 68           PLA
0190: 36B3 20 C9 2D           JSR   HEXAX
0200: 36B6 60           RTS
0210:                   ;
0220:                   ;
0230:                   ; ROUTINE TO PRINT THE
0240:                   ; SYMBOL-TABLE.
0250:                   ;
0260: 36B7 20 E6 25           PRNT   JSR   SETSY RESET POINTERS
0270: 36BA 20 EB 36           JSR   PRTSO PRINT HEADER
0280: 36BD A9 FB           PRNT1 LDAIM $FB FOUR ENTRIES / LINE
0290: 36BF 85 54           STAZ   CNT
0300: 36C1 E6 54           PRNT2 INCZ CNT

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0310: 36C3 30 06          BMI    PRNT3  SPACE LEFT
0320: 36C5 20 DF 36       JSR    PRTLIN NO PRINT LINE
0330: 36C8 4C BD 36       JMP    PRNT1
0340: 36CB 20 A4 25       PRNT3  JSR    PRSYM
0350: 36CE A0 04          LDYIM $04   PRINT ADDRESS
0360: 36D0 B1 3F          LDAIY SLO
0370: 36D2 AA              TAX
0380: 36D3 C8              INY
0390: 36D4 B1 3F          LDAIY SLO
0400: 36D6 20 C9 2D       JSR    HEXAX
0410: 36D9 20 C1 27       JSR    DA0S   TO NEXT ONE
0420: 36DC 90 E3          BCC    PRNT2  STILL ANY LEFT
0430: 36DE 60              RTS    NO

0440: ;
0450: ;
0460: ; ROUTINE TO PRINT A LINE AND
0470: ; TO KEEP TRACK OF PAGE-SIZE
0480: ;
0490: 36DF E6 7C          PRTLIN INCZ PGN2
0500: 36E1 30 04          BMI    OKLIN
0510: 36E3 20 EB 36       JSR    PRTSO PRINT HEADER
0520: 36E6 60              RTS
0530: 36E7 20 E7 2D       OKLIN  JSR    CRLF  FINISH LINE
0540: 36EA 60              RTS

0550: ;
0560: ;
0570: ; ROUTINE TO PRINT HEADER
0580: ;
0590: 36EB 20 8F 25       PRTSO  JSR    ACRLF
0600: 36EE 20 F9 36       JSR    PRTS1
0610: 36F1 20 0E 37       JSR    PRTS2
0620: 36F4 A9 C4          LDAIM $C4
0630: 36F6 85 7C          STAZ   PGN2  RESET LINE COUNT
0640: 36FB 60              RTS

0650: ;
0660: ;
0670: ; ROUTINE TO PRINT FIRST PART OF
0680: ; THE HEADER LINE
0690: ;
0700: 36F9 A0 4B          PRTS1  LDYIM $4B
0710: 36FB 20 A0 27       JSR    MESSY
0720: 36FE AD A6 2E       LDA    SYMBOL PRINT ADDRESSES
0730: 3701 A2 00          LDXIM $00
0740: 3703 20 EB 2D       JSR    HEXSP
0750: 3706 A5 42          LDAZ   EHJ
0760: 3708 A6 41          LDXZ   ELO
0770: 370A 20 C9 2D       JSR    HEXAX
0780: 370D 60              RTS

0790: ;
0800: ;
0810: ; ROUTINE TO PRINT SECOND PART
0820: ; OF THE HEADER
0830: ;
0840: 370E 20 EE 2D       PRTS2  JSR    OUTSP
0850: 3711 20 EE 2D       JSR    OUTSP
0860: 3714 A2 00          LDXIM $00  PRINT DATE
0870: 3716 B5 75          PRTS2A LDAZX DATE
0880: 3718 20 F0 2D       JSR    OUTCH
0890: 371B E8              INX
0900: 371C E0 06          CPXIM $06  ALL DONE ?

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0910: 371E D0 F6           BNE    PRTS2A NO
0920: 3720 20 EE 2D         JSR    OUTSP
0930: 3723 A0 45           LDYIM $45    PRINT 'PAGE'
0940: 3725 B9 0A 2C  PRTS2B LDAAY MESSG
0950: 3728 C9 40           CMPIM $40    END ?
0960: 372A F0 06           BEQ    PRTS2C YES
0970: 372C 20 F0 2D         JSR    OUTCH NO
0980: 372F C8               INY    NEXT ONE
0990: 3730 D0 F3           BNE    PRTS2B
1000: 3732 20 EE 2D  PRTS2C JSR    OUTSP
1010: 3735 A5 7B           LDAZ   PAGE2  PRINT PAGE-NUMB
1020: 3737 F8               SED
1030: 3738 18               CLC
1040: 3739 69 01           ADCIM $01    ADD 1 TO PAGE2
1050: 373B D8               CLD
1060: 373C 85 7B           STAZ   PAGE2
1070: 373E 20 CD 2D         JSR    HEXOUT
1080: 3741 20 8F 25         JSR    4CRLF
1090: 3744 60               RTS
1100: ;                     ;
1110: 3745 20 EE 2D  QUEST  JSR    OUTSP  PRT ' XREF?'
1120: 3748 A0 00           LDYIM $00
1130: 374A B9 9F 25  QUEST1 LDAAY TEXT   GET A CHAR
1140: 374D 20 F0 2D         JSR    DUTCH  PRINT IT
1150: 3750 C8               INY
1160: 3751 C0 05           CPYIM $05    ALL DONE
1170: 3753 D0 F5           BNE    QUEST1 NO
1180: 3755 20 EE 2D         JSR    OUTSP
1190: 3758 20 97 27         JSR    YSN02  GET ANSWER
1200: 375B D0 02           BNE    QUEST2 NO XREF
1210: 375D A9 00           LDAIM $00
1220: 375F 85 7D  QUEST2  STAZ   XRFIND
1230: 3761 A0 18           LDYIM $18    PRINT 'SAVE-ID?'
1240: 3763 20 A0 27         JSR    MESSY
1250: 3766 60               RTS    AND RETURN
1260: ;                     ;

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SYMBOL TABLE 4000 44C0 100679 PAGE 01

ADTABLE	2894	11-0050				
ADTBLR	2897	11-0060	1C-1250			
BUFFER	0100	02-0360	07-0610	1C-1770		
BUFIN	2E41	02-0520	04-0050	07-0590	1C-0310	
CLDCRL	253E	07-0420	03-0070	07-0520		
CNT	0054	02-0170	02-0180	07-0130	1D-1140	1D-1190
			1E-0260	1E-0310	1E-0720	1E-0730
			1F-0290	1F-0300		
COLD	2004	03-0070	05-0050			
CRLF	2DE7	02-0480	07-0430	07-1010	07-1100	1D-0590
			1F-0530			
DADAR	252A	07-0260				
DADS	27C1	02-0420	1D-1150	1E-0680	1E-0870	1F-0410
DADSR	2526	07-0240	1E-0270	1E-0820	1E-1020	
DADX	27C3	0E-0050	1D-1170			
DADXR	2528	07-0250	1E-0290			
DATE	0075	02-0310	02-0320	07-0620	1D-0250	1F-0870
EHI	0042	02-0140	1D-0580	1F-0750		
ELO	0041	02-0130	02-0140	1C-0120	1C-1050	1C-1080
			1C-1140	1D-0560	1F-0760	
ENDPAG	257B	07-0970	0C-0050			
ENDPGQ	257F	07-0990	07-1020	1D-0770		
ENDPGR	2589	07-1030	07-1000			
ENDPGS	258C	07-1040	07-0980			
ERID	2EAC	19-0160	1A-0050			
EXHI	0074	02-0300	02-0310	07-0350	1C-0530	1C-0640
			1C-1440			
EXLO	0073	02-0290	02-0300	07-0330	1C-0510	1C-0660
			1C-1420			
FNDSBL	2837	0F-0050				
FNDSYM	2837	02-0430				
FNDXFQ	367C	1E-1020				
FNDXRF	366F	1E-0950	1E-0590	1E-0650	1E-0840	1E-1030
GETARG	298B	02-0440	1C-0390			
GETDAY	2547	07-0520	03-0050			
GETDYQ	254C	07-0540	07-0580			
GETDYR	255C	07-0610	07-0650			
GOGO	3692	1E-1130				
GTARG	33B5	1C-0380	0D-0050	10-0050		
HEAXX	2DC9	02-0460	1E-0500	1F-0190	1F-0400	1F-0770
HEXOUT	2DCD	02-0470	07-1190	1F-0090	1F-1070	
HEXSP	2DEB	02-0490	1F-0740			
HIPAR	001D	02-0090	1D-0570			
ID	0062	02-0220	02-0230	1C-1320		
INSID	33FD	1C-1040	11-0050			
INSXLO	344A	1C-1500	1C-1110	1C-1310	1C-1340	1C-1370
			1C-1400	1C-1710		
INSXLR	345B	1C-1580	1C-1510	1C-1550		
LESS	35BE	1D-1150	1D-0920	1D-0960	1D-1030	
LESSR	35F4	1E-0270	1E-0110	1E-0150		
LOOPB	359E	1D-0970	1D-0870			
LOOPT	3588	1D-0850	1D-1180			
LOOPTR	35D0	1E-0070	1E-0300			
LOFAR	001A	02-0080	1D-0460	1D-0520	1D-0550	1D-0610
			1D-0680	1D-0850		
MAIN	25F8	09-0050				
MAINR	25FB	09-0060	1C-0180			
MAYBE	3683	1E-1050	1E-1010			
MESSG	2C0A	02-0450	1D-0160	1D-0330	1F-0940	
MESSY	27A0	02-0410	1F-0710	1F-1240		

MOVET	35AD	1D-1050	1D-1120
MOVETR	35E3	1E-0170	1E-0240
MOVEX	35AB	1D-1040	1D-0910
MOVXR	35E1	1E-0160	1E-0100
MTCRLF	33E4	1C-0780	13-0050
MTCRLQ	33EB	1C-0810	1C-0790
NEXTY	358F	1D-0890	1D-0950
NEXTYR	35D2	1E-0080	1E-0140
NHI	0016	02-0070	1C-1350
NLO	0015	02-0060	02-0070 1C-1380
NOGO	3695	1E-1150	1E-1040 1E-1080 1E-1120
NOPUNT	33B1	1C-0310	1C-0260 1C-0280
OBJECT	2EA8	19-0120	
OKLIN	36E7	1F-0530	1F-0500
OKSQ	29B3	12-0060	1C-1780
OUTCH	2DF0	02-0510	07-0550 1C-0300 1D-0190 1D-0260 1D-0360 1F-0110 1F-0880 1F-0970 1F-1140
OUTPUT	2EA0	02-0530	1C-0890 1C-0930
OUTSP	2DEE	02-0500	07-1200 1D-0220 1D-0230 1D-0300 1D-0310 1E-0770 1F-0050 1F-0060 1F-0840 1F-0850 1F-0920 1F-1000 1F-1110 1F-1180
OUTMPD	33EC	1C-0890	18-0050
OUTPDQ	33F3	1C-0920	1C-0950
PAGE	0055	02-0190	02-0200
PAGER	007B	02-0320	02-0330 1D-0650 1F-1010 1F-1060
PASS	004C	02-0150	02-0160 1C-0250
PGN	0056	02-0210	07-0990 1D-0760
PGNR	007C	02-0330	02-0340 1D-0660 1D-0750 1F-0490 1F-0630
PLGXLO	33D1	1C-0620	1C-0400
PMODE	0063	02-0230	07-0450
PRFLAG	004D	02-0160	07-0970 1C-0270 1C-0780 1D-0130
PRNT	36B7	1F-0260	1D-0740
PRNTQ	36BD	1F-0280	1F-0330
PRNTR	36C1	1F-0300	1F-0420
PRNTS	36CB	1F-0340	1F-0310
PRSYM	25A4	02-0380	1E-0440 1F-0340
PRTID	2598	07-1190	19-0160
PRTLIN	36DF	1F-0490	1E-0670 1E-0750 1E-0860 1F-0320
PRTSP	36EB	1F-0590	1E-0430 1F-0270 1F-0510
PRTSQ	36F9	1F-0700	1D-0510 1F-0600
PRTSR	370E	1F-0840	1F-0610
PRTSRA	3716	1F-0870	1F-0910
PRTSRB	3725	1F-0940	1F-0990
PRTSRC	3732	1F-1000	1F-0960
PRTSYM	3698	1F-0050	1E-0600 1E-0810
PRTXFQ	3609	1E-0440	1E-0690 1E-0880
PRTXFR	3644	1E-0710	1E-0660 1E-0800
PRTXFS	3648	1E-0730	1E-0850
PRTXFT	3651	1E-0770	1E-0790
PRTXFU	3659	1E-0810	1E-0740
PRTXFU	3666	1E-0860	1E-0830
PRTXFW	366E	1E-0890	1E-0700
PRTXRF	3603	1E-0420	1D-0720
PSSXLO	33BE	1C-0460	1C-0380
QUEST	3745	1F-1110	0B-0050
QUESTQ	374A	1F-1130	1F-1170
QUESTR	375F	1F-1220	1F-1200

SYMBOL TABLE 4000 44C0 100679 PAGE 03

REGSYM	3390	1C-0100	09-0050			
RESTART	2031	02-0370	07-1040	1D-0630		
SAVE	007E	02-0350	1C-0480	1C-0500	1C-0520	1C-0540
			1C-0630	1C-0650	1C-0670	1C-0690
			1C-0910	1C-0940		
SETSY	25E6	02-0390	1D-0840	1E-0420	1F-0260	
SETSYR	2514	07-0110	1E-0060	1E-0510	1E-0610	
SHI	0040	02-0120	02-0130			
SLO	003F	02-0110	02-0120	1C-1690	1C-1730	1D-0900
			1D-0990	1D-1020	1D-1050	1D-1080
			1E-0460	1E-0490	1E-0530	1E-0570
			1F-0360	1F-0390		
SORTQ	3585	1D-0840	1D-0670	1D-1200		
SORTR	35CD	1E-0060	1D-0710	1E-0320		
SOURCE	2EA4	19-0080				
SOURCEF	2EA5	19-0090				
SOURCM	2EA3	19-0070				
SPECIN	33A4	1C-0250	0A-0050			
SSHI	0070	02-0260	02-0270	07-0170	07-0290	07-0310
			07-0340			
SSLO	006F	02-0250	02-0260	07-0120	07-0270	07-0280
			07-0320	1E-0090	1E-0170	1E-0200
			1E-0960	1E-0990	1E-1070	1E-1110
			1F-0080	1F-0130	1F-0160	
STRRST	3429	1C-1310	1C-1160	1C-1750		
STRXFQ	3472	1C-1760	1C-1660			
STRXRF	345C	1C-1650	12-0050			
SXHI	0072	02-0280	02-0290	07-0180	1C-0170	1C-0490
			1C-0680	1C-1430	1C-1520	1C-1530
			1C-1570			
SXLO	0071	02-0270	02-0280	07-0150	1C-0150	1C-0470
			1C-0700	1C-1100	1C-1150	1C-1330
			1C-1360	1C-1390	1C-1410	1C-1500
			1C-1560	1C-1700	1C-1740	1E-0080
			1E-0190	1F-0220		
SYMBOL	2EA6	19-0100	1F-0720			
SYMF	2EA7	19-0110				
SYMID	0060	02-0240	02-0250	1C-0130	1C-0140	1C-1070
			1C-1130	1C-1180	1C-1200	1C-1210
			1C-1230	1E-0550	1E-0580	1E-0620
			1E-0640	1E-0970	1E-1000	1E-1060
			1E-1090			
SYMMAX	2EAA	19-0140	1C-1540			
SYMXRF	2EA9	19-0130	07-0160	1C-0160		
TABLE	353C	1D-0460	06-0050			
TABLEQ	3546	1D-0510	1D-0480	1H-0620		
TABLER	3560	1D-0630	1D-0540			
TABLES	3563	1D-0640	1D-0500			
TABLET	357B	1D-0740	1D-0700			
TABLEU	357E	1D-0750	1D-0730			
TEKST	2567	07-0710	07-0540			
TEXT	259F	07-1260	1F-1130			
TOPFRT	3500	1D-0130	14-0050			
TOPFTQ	3506	1D-0160	1D-0210			
TOPPTR	3513	1D-0220	1D-0180			
TOPPTS	351B	1D-0250	1D-0290			
TOPPTT	352B	1D-0320	1D-0370			
TOPPTU	3539	1D-0380	1D-0140	1H-0350		
XHI	0056	02-0200	02-0210			
XLO	0055	02-0180	02-0190	1H-0890	1D-0980	1D-1010

		1D-1070	1D-1100			
XRFIND	007D	02-0340	02-0350	1C-0110	1C-1650	1F-1220
YCOM	0031	02-0100	1C-1760			
YSNOR	2797	02-0400	1F-1190			
TCRLF	258F	07-1090	07-1030	1C-0800	1F-0590	1F-1080
TCRLFQ	2591	07-1100	07-1120			

SYMBOL TABLE 4000 44C0 100679 PAGE 01

NLO	0015	02-0060	02-0070	1C-1380		
NHI	0016	02-0070	1C-1350			
LOPAR	001A	02-0080	1D-0460	1D-0520	1D-0550	1D-0610
		1D-0680	1D-0850			
HIFAR	001D	02-0090	1D-0570			
YCOM	0031	02-0100	1C-1760			
SLO	003F	02-0110	02-0120	1C-1690	1C-1730	1D-0900
			1D-0990	1D-1020	1D-1050	1D-1080
			1E-0460	1E-0490	1E-0530	1E-0570
			1F-0360	1F-0390		
SHI	0040	02-0120	02-0130			
ELO	0041	02-0130	02-0140	1C-0120	1C-1050	1C-1080
			1C-1140	1D-0560	1F-0760	
EHI	0042	02-0140	1D-0580	1F-0750		
PASS	004C	02-0150	02-0160	1C-0250		
PRFLAG	004D	02-0160	07-0970	1C-0270	1C-0780	1D-0130
CNT	0054	02-0170	02-0180	07-0130	1D-1140	1D-1190
			1E-0260	1E-0310	1E-0720	1E-0730
			1F-0290	1F-0300		
PAGE	0055	02-0190	02-0200			
XLO	0055	02-0180	02-0190	1D-0890	1D-0980	1D-1010
			1D-1070	1D-1100		
PGN	0056	02-0210	07-0990	1D-0760		
XHI	0056	02-0200	02-0210			
ID	0062	02-0220	02-0230	1C-1320		
PMODE	0063	02-0230	07-0450			
SYMID	006D	02-0240	02-0250	1C-0130	1C-0140	1C-1070
			1C-1130	1C-1180	1C-1200	1C-1210
			1C-1230	1E-0550	1E-0580	1E-0620
			1E-0640	1E-0970	1E-1000	1E-1060
			1E-1090			
SSLO	006F	02-0250	02-0260	07-0120	07-0270	07-0280
			07-0320	1E-0090	1E-0170	1E-0200
			1E-0960	1E-0990	1E-1070	1E-1110
			1F-0080	1F-0130	1F-0160	
SSHII	0070	02-0260	02-0270	07-0170	07-0290	07-0310
			07-0340			
SXLO	0071	02-0270	02-0280	07-0150	1C-0150	1C-0470
			1C-0700	1C-1100	1C-1150	1C-1330
			1C-1360	1C-1390	1C-1410	1C-1500
			1C-1560	1C-1700	1C-1740	1E-0080
			1E-0190	1E-0220		
SXHI	0072	02-0280	02-0290	07-0180	1C-0170	1C-0490
			1C-0680	1C-1430	1C-1520	1C-1530
			1C-1570			
EXLO	0073	02-0290	02-0300	07-0330	1C-0510	1C-0660
			1C-1420			
EXHI	0074	02-0300	02-0310	07-0350	1C-0530	1C-0640
			1C-1440			
DATE	0075	02-0310	02-0320	07-0620	1D-0250	1F-0870
PAGER	007B	02-0320	02-0330	1D-0650	1F-1010	1F-1060
PGNR	007C	02-0330	02-0340	1D-0660	1D-0750	1F-0490
			1F-0630			
XRFIND	007D	02-0340	02-0350	1C-0110	1C-1650	1F-1220
SAVE	007E	02-0350	1C-0480	1C-0500	1C-0520	1C-0540
			1C-0630	1C-0650	1C-0670	1C-0690
			1C-0910	1C-0940		
BUFFER	0100	02-0360	07-0610	1C-1770		
COLD	2004	03-0070	05-0050			
RESTART	2031	02-0370	07-1040	1D-0630		

SETSYR	2514	07-0110	1E-0060	1E-0510	1E-0610
DADSR	2526	07-0240	1E-0270	1E-0820	1E-1020
DADXR	2528	07-0250	1E-0290		
DADAR	252A	07-0260			
CLDCRL	253E	07-0420	03-0070	07-0520	
GETDAY	2547	07-0520	03-0050		
GETDYQ	254C	07-0540	07-0580		
GETIDYR	255C	07-0610	07-0650		
TEKST	2567	07-0710	07-0540		
ENDPAG	257B	07-0970	0C-0050		
ENDPGQ	257F	07-0990	07-1020	1D-0770	
ENDPGR	2589	07-1030	07-1000		
ENDPGS	258C	07-1040	07-0980		
TCRLF	258F	07-1090	07-1030	1C-0800	1F-0590
TCRLFQ	2591	07-1100	07-1120		
PRTID	2598	07-1190	19-0160		
TEXT	259F	07-1260	1F-1130		
PRSYM	25A4	02-0380	1E-0440	1F-0340	
SETSY	25E6	02-0390	1D-0840	1E-0420	1F-0260
MAIN	25F8	09-0050			
MAINR	25FB	09-0060	1C-0180		
YSNOR	2797	02-0400	1F-1190		
MESSY	27A0	02-0410	1F-0710	1F-1240	
DADS	27C1	02-0420	1D-1150	1E-0680	1E-0870
DADX	27C3	0E-0050	1D-1170		
FNDSBL	2837	0F-0050			
FNDSYM	2837	02-0430			
ADTABLE	2894	11-0050			
ADTBLR	2897	11-0060	1C-1250		
GETARG	298B	02-0440	1C-0390		
OKSQ	29B3	12-0060	1C-1780		
MESSG	2C0A	02-0450	1D-0160	1D-0330	1F-0940
HEXAX	2DC9	02-0460	1E-0500	1F-0190	1F-0400
HEXOUT	2DCD	02-0470	07-1190	1F-0090	1F-1070
CRLF	2DE7	02-0480	07-0430	07-1010	07-1100
			1F-0530		
HEXSP	2DEB	02-0490	1F-0740		
OUTSP	2DEE	02-0500	07-1200	1D-0220	1D-0230
			1D-0310	1E-0770	1F-0050
			1F-0840	1F-0850	1F-0920
			1F-1110	1F-1180	1F-1000
OUTCH	2DF0	02-0510	07-0550	1C-0300	1D-0190
			1D-0360	1F-0110	1F-0880
			1F-1140		1F-0970
BUFIN	2E41	02-0520	04-0050	07-0590	1C-0310
OUTPUT	2EA0	02-0530	1C-0890	1C-0930	
SOURCM	2EA3	19-0070			
SOURCE	2EA4	19-0080			
SOURCF	2EA5	19-0090			
SYMBOL	2EA6	19-0100	1F-0720		
SYMF	2EA7	19-0110			
OBJECT	2EA8	19-0120			
SYMXRF	2EA9	19-0130	07-0160	1C-0160	
SYMMAX	2EAA	19-0140	1C-1540		
ERID	2EAC	19-0160	1A-0050		
RESSYM	3390	1C-0100	09-0050		
SPECIN	33A4	1C-0250	0A-0050		
NOPUNT	33B1	1C-0310	1C-0260	1C-0280	
GTARG	33B5	1C-0380	0D-0050	10-0050	
PSSXLO	33BE	1C-0460	1C-0380		

PLSXLO	33D1	1C-0620	1C-0400		
MTCRLF	33E4	1C-0780	13-0050		
MTCRLQ	33EB	1C-0810	1C-0790		
OUTMPD	33EC	1C-0890	18-0050		
OUTPDIQ	33F3	1C-0920	1C-0950		
INSID	33FD	1C-1040	11-0050		
STRRST	3429	1C-1310	1C-1160	1C-1750	
INSXLO	344A	1C-1500	1C-1110	1C-1310	1C-1340
			1C-1400	1C-1710	1C-1370
INSXLR	345B	1C-1580	1C-1510	1C-1550	
STRXRF	345C	1C-1650	12-0050		
STRXFQ	3472	1C-1760	1C-1660		
TOPPRT	3500	1D-0130	14-0050		
TOPPTQ	3506	1D-0160	1D-0210		
TOPPTR	3513	1D-0220	1D-0180		
TOPPTS	351B	1D-0250	1D-0290		
TOPPTT	352B	1D-0320	1D-0370		
TOPPTU	3539	1D-0380	1D-0140	1D-0350	
TABLE	353C	1D-0460	06-0050		
TABLEQ	3546	1D-0510	1D-0480	1D-0620	
TABLER	3560	1D-0630	1D-0540		
TABLES	3563	1D-0640	1D-0500		
TABLET	357B	1D-0740	1D-0700		
TABLEU	357E	1D-0750	1D-0730		
SORTQ	3585	1D-0840	1D-0670	1D-1200	
LOOPT	3588	1D-0850	1D-1180		
NEXTY	358F	1D-0890	1D-0950		
LOOPB	359E	1D-0970	1D-0870		
MOVEX	35AB	1D-1040	1D-0910		
MOVET	35AD	1D-1050	1D-1120		
LESS	35BE	1D-1150	1D-0920	1D-0960	1D-1030
SORTR	35CD	1E-0060	1D-0710	1E-0320	
LOOPTR	35D0	1E-0070	1E-0300		
NEXTYR	35D2	1E-0080	1E-0140		
MOVXR	35E1	1E-0160	1E-0100		
MOVETR	35E3	1E-0170	1E-0240		
LECSR	35F4	1E-0270	1E-0110	1E-0150	
PRTXRF	3603	1E-0420	1D-0720		
PRTXFQ	3609	1E-0440	1E-0690	1E-0880	
PRTXFR	3644	1E-0710	1E-0660	1E-0800	
PRTXFS	3648	1E-0730	1E-0850		
PRTXFT	3651	1E-0770	1E-0790		
PRTXFU	3659	1E-0810	1E-0740		
PRTXFV	3666	1E-0860	1E-0830		
PRTXFW	366E	1E-0890	1E-0700		
FNDXRF	366F	1E-0950	1E-0590	1E-0650	1E-0840
FNDXFQ	367C	1E-1020			1E-1030
MAYBE	3683	1E-1050	1E-1010		
GOGO	3692	1E-1130			
NOGO	3695	1E-1150	1E-1040	1E-1080	1E-1120
FRTSYM	3698	1F-0050	1E-0600	1E-0810	
FRNT	36B7	1F-0260	1D-0740		
FRNTQ	36BD	1F-0280	1F-0330		
FRNTR	36C1	1F-0300	1F-0420		
FRNTS	36CB	1F-0340	1F-0310		
PRTLIN	36DF	1F-0490	1E-0670	1E-0750	1E-0860
OKLIN	36E7	1F-0530	1F-0500		
PRTSP	36EB	1F-0590	1E-0430	1F-0270	1F-0510
PRTSQ	36F9	1F-0700	1D-0510	1F-0600	
PRTSR	370E	1F-0840	1F-0610		

PRTSRA	3716	1F-0870	1F-0910
PRTSRE	3725	1F-0940	1F-0990
PRTSRC	3732	1F-1000	1F-0960
QUEST	3745	1F-1110	0B-0050
QUESTQ	374A	1F-1130	1F-1170
QUESTR	375F	1F-1220	1F-1200